THE CHEMIST AND DRUGGIST

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FOR EXPORT MERCHANT-SHIPPERS.

The Chemist and Druggist, of March 10, will be circulated to all firms in the United Kingdom who last year exported druggists' goods of any kind. This circulation will be in addition to the regular issue to our subscribers throughout Europe, Asia, Africa, India, America, and Australasia. Our past experience convinces us that this is a valuable issue to advertisers, because it is practically the only opportunity that merchant-shippers have of coming into direct touch with the drug and allied trades, and many of the most important merchants file the copy for future reference in executing indents. We also find that this is the most favourable time of the year for directly addressing merchants, and wholesale houses will do well to communicate with the Publisher in regard to space and specially-arranged advertisements.

POSTCARD COMPETITION.

February, 1894.

We remind subscribers, their employés, and members of their families that this month's competition closes on Wednesday next. What we ask them to do is to draw up an advertisement for Mr. Blank, a chemist, who has a liver-pill which he thinks a lot of. He has taken a space 2 inches by 3 inches in a local paper, and now requires a catching advertisement to put into it. Competitors will please use postcards for their ideas.

Summary.

We report a death from sweet spirit of nitre. The victim, a woman of 54, drank 16 oz. in a day (p. 269).

Our Paris correspondent's letter contains further reference to municipal pharmacies, which the Socialists appear to be determined to establish (p. 270).

The Belgian Cour de Cassation has decided that the labels on proprietary medicines must indicate the ingredients. The decision is given in reference to Sequah's medicine (p. 283).

In the Christmas shop-window competition organised by *Tit-Bits* a number of chemists participated. By the courtesy of the Editor of *Tit-Bits* we have been favoured with the photographs, and give a reproduction of the whole in a group on p. 279.

The centenary of the birth of F. F. Runge, who discovered aniline and carbolic acid, has just been celebrated at Oranienburg. He was a pharmacist in the early part of his career, and made many notable discoveries apart from those mentioned (p. 271).

The chemists of Kingston have felt insulted at the remarks made by the Medical Officer to the Board of Guardians there regarding the supply of medicines. They noticed the remarks in this journal, and have protested in writing to the Board (p. 268).

Mr. Edwin Williams has informed the Liverpool Chemists' Association that he has been unable to find pure oleates in the market, and he stated that oleate of mercury especially is liable to decomposition. He showed how better oleates may be made (p. 273).

The use of animal or gland extracts in thereapeutics is growing steadily. In an Editorial note the physiological principles upon which such treatment is based are pointed out, and the probable influence of the practice in pharmacy is indicated. Incidentally the most recent views of the treatment are commented on (p. 281).

The Glasgow Pharmaceutical Association had a useful evening last week, in the course of which a number of dispensing topics were mentioned and discussed (p. 274). The Edinburgh Assistants' Association also had a good meeting, the most important item being a suggestion by Mr. C. F. Henry to double the strength of tr. iodi, B.P. (p 277).

There appears at present to be a decided move on the part of the public in regard to the more rigid control of the sale of poisons. The *Pall Mall Gazette*, amongst other newspapers, has given expression to such sentiments, and following upon recent action by the Pharmaceutical Society and the police, the movement is satisfactory. We comment upon the whole matter on p. 282.

A valuable contribution on the ash values of saffron is made by Mr. John Barclay, B.Sc., of Birmingham, who finds that neglect of recognising loss of moisture in samples may cause analysts to return the ash percentage too high, and so condemn the purity of the samples. Mr. Barclay backs up his statement with ample data, and suggests a revision of the pharmacopœial standard (p. 275).

Dr. Bernard Dyer has suggested to the Chemical Society an improved method of estimating the available mineral plant-food in soils. This consists in treating a known weight of the soil with a 1 per cent. citric acid solution (which acidity closely approximates to that of rootlet-juice), and determining phosphate and potash in the usual way. The paper was considered a highly important one, but it was freely criticised. Rothamsted soils were used in the experiments (p. 273).

Mr. Edmund White, improving upon an old method, proposes to preserve fresh infusions by keeping them in sterilised flasks plugged with sterilised cotton. He also recommended the use of chloroform as a preservative (p. 274). The same subject has been discussed in the Midland Association. Mr. John Barclay finds that inf. gent. conc. is very variable, and Mr. Alcock got several students to make inf. calumbæ and inf. quassiæ, and the variations in strength were startling (p. 275).

English News.

The Editor is obliged to correspondents who send local newspapers containing items of interest to the trade. He will be further obliged if such paragraphs be marked in all cases.

Songs and Sports.

The Apollinaris Company's staff held their annual "smoker" at Batchelor's Restaurant, Piccadilly Place, on St. Valentine's night. Mr. R. Pain, the popular manager, presided. An excellent programme was carried out in first-class style before a large and appreciative audience. Mr. Potous presided skilfully at the piano. Mr. Salter's comic recitations were much applauded, and while Mr. Stockwell warbled "The Queen of the Earth," the company sipped "The Queen of Table-waters." Messrs. Eastoe, Jones, Grant, T. Farmer, C. Farmer, Garner, Butler, Booker, Grout, and Wool also contributed to this very successful concert.

On February 14 the principals and over sixty students of the Westminster College of Chemistry and Pharmacy journeyed to Kew to celebrate the birthday of Mr. G. S. V. Wills. A football-match, between Welsh and English students, was played in the afternoon, resulting in a victory for the former—four goals to two. The principals provided a substantial tea at 5.30, after which an excellent programme of songs and recitations was rendered, and in the course of the evening a handsome set of knives in polished-oak case was presented to Mr. Wills, and silver-mounted letter and cigar cases to Mr. Wootton.

On February 13 a football-match was played by the Major and Minor students of the Northern School of Pharmacy, which ended in a victory for the Majors by six goals to *nil*. A social evening followed the match, Mr. Lawson, Ph.C., in the chair. Toasts were drunk to Mr. Clayton, the principal, and Mr. Lawson, the assistant.

Obliging a Customer.

Mr. Herbert Amoore, chemist, of Lansdowne Crescent Bournemouth, appeared before the Magistrates last week to answer a charge of having on October 2 last sold "wine" without a licence. An Excise officer purchased Coleman's (Wincarnis) Beef-wine. The Excise supervisor, who prosecuted, was prepared with evidence of the analysis, but defendant pleaded guilty, and explained that he had none of the "wine" in his shop, and did not sell it, but an assistant on being asked for it, thinking he was obliging a customer, went out and got it from a neighbouring shop. The Magistrates expressed an opinion that defendant was not morally guilty of infringing the Act, but an offence having been committed for which he was legally responsible, they imposed a fine of 1*l*., which included the costs. The supervisor applied for the expenses of analysing the wine, but the Chairman remarked that the application was made too late.

Looting a Drug-shop.

The wholesale and retail druggists' shop in George Street, Bradford, occupied by Messrs. John Hey & Sons, was burglared last week. The thieves made a hole in the roof and ransacked the premises. They carried off a large quantity of goods and left everything in confusion. No money was taken, and no attempt had been made to force the safe.

Kingston Chemists Complain.

At the February meeting of the Kingston Board of Guardians the Clerk read a letter from Messrs. Clarke & Co., chemists, stating that they had read in The Chemist and Druggist that at a meeting of the Board Dr. Donald reported that he required some drugs, a list of which he handed to the Clerk, and said if the drugs were got in the district the Board would certainly have to pay more for them, and would probably not get them as good. They protested against such statements, and offered to tender for the supply of drugs, and as they manufactured most of their pharmaceutical preparations on the premises, felt sure their prices would compare favourably with those of any other manufacturers; while as regarded quality they only recognised the standard of the British Pharmacopœia. The Clerk also read another document signed by Samuel Walmsley, Edwd. Whaley, Edwd. C. Tamplin, W. Brewster, C. J. Griffiths, H. S. Cooper, A. Higgs, Clarke & Co., Wm. Acfield, and Charles Lowe, all chemists and druggists, protesting against the Medical Officer's assertion as a most unwarrantable insult. The communications were not discussed.

The Soothing-syrup Sediment.

Mr. Hodgkinson held an inquest at Tottenham on Saturday regarding the death of Elsie Rouse, aged 6 months, the daughter of a compositor. The mother deposed that she had given the baby half-a-teaspoonful of "Denzil Thompson's comforting syrup for children teething." Dr. James May said the cause of death was some narcotic poison in the soothing-syrup. Witness had had a letter from the maker of the syrup, who admitted that it contained morphia. The Coroner remarked that this was another case where the sediment in a bottle of this kind of stuff had proved fatal.

Jersey Items.

Ed. de Renty, the French chemist, of 15 Regent Road, Jersey, whose arrest on a charge of defrauding the local gaslight company we noted last week, on being presented at the Police Court denied the charge, saying he was not even aware of the existence of the connecting-pipe which he was said to have illegally inserted. The evidence showed, however, that the accused had been seen to turn off the tap of this pipe, which had been ingeniously concealed. The hearing of the case was eventually adjourned. Bail had been allowed in the sum of 10*l*., but this the Magistrate increased to 25*l*. It was again increased to 50*l*. on Tuesday, when the case was further heard.

At the annual meeting of the Jersey Dispensary Infirmary, last week, special thanks were voted to the honorary dental-surgeon, Mr. Balcomb, who was stated to pay hundreds of visits among the poor of the town.

Early Closing.

The chemists of Farningham, near Dartford (Kent), have decided to close their shops on Thursdays at 2, instead of 5 o'clock, as heretofore.

Poisoned by Aconite Liniment.

At an inquest held at Heckington on the body of Mr. Richard Godson, Louisa Trueblood, deceased's housemaid, stated that she found her master sick, and he said he was afraid he had taken medicine out of the wrong bottle, and pointed to one labelled "Poison: for outward use only." Mr. Sumner, chemist and druggist, said he supplied the liniment for neuralgia contained in the bottle; it was composed of aconite and chloroform. Dr. Welchman attributed death to aconite liniment, although a small quantity only had been taken. A verdict was returned accordingly.

Analysts Differ.

The Truro Water Company having received an unsatisfactory report of their water by Dr. Bernard Dyer, samples were submitted to Mr. Benedict Kitto, who has pronounced the water "both pure and wholesome." At the last meeting of the corporation one member said the mistake may have been due to dirty bottles, and another member pointed out that Dr. Dyer spoke of a microscopical analysis, and Mr. Kitto did not.

Died for Want of Chlorodyne.

At an inquest held last week by Dr. Danford Thomas, at Holloway, it was shown that Mrs. Stadmüller (46), wife of a watchmaker at Highbury, had been taking chlorodyne for eight years, and was never happy unless she had a bottle handy. She obtained a 2-oz. bottle on the Saturday, and on Monday morning she fell on the landing on the first floor, and died before a doctor could arrive. Dr. W. H. Noble, who had made an autopsy, said that death was due to syncope from sudden cardiac failure. Mrs. Stadmüller had a weak, fatty heart. Though an habitual chlorodyne user there was no trace of poison either in the stomach or its contents. It was stated that she had no chlorodyne on the Sunday or on the Monday morning. The Coroner:

Perhaps she died for the want of it—for the want of a stimulus to a weak, feeble heart. Mr. Blackham, chemist, of Holloway Road, said the deceased usually bought two or three 2-oz. bottles of chlorodyne from him in the course of a week. The jury returned a verdict in accordance with the medical testimony.

Electric Lighting.

Mr. Hayton, jun., has fitted an arc electric lamp outside his father's chemist's shop in the High Street, Wigton. It is of 2,000-candle power, and was constructed by himself. The display, of course, attracts great attention.

Alleged Illegal Distress.

In the Lambeth County Court, on February 15, Mr. Child, a druggist and herbalist, of the Commercial Road, Peckham, sought to recover 450*l.*, as damages for an alleged irregular, excessive, and illegal distress, levied at the instigation of the defendant, a Mr. Marcussen. The case had been remitted from the High Court.

The plaintiff's case was that a considerable portion of the goods seized comprised shop-fixtures, and were therefore privileged from distress. He further complained that the property was sold by auction at a ridiculously low price. It was also alleged that the distress was dictated by a desire to injure the plaintiff in his business, and was vindictive because it was thought that the plaintiff had not sufficient means to enable him to seek the protection of a court of law.

For the defence it was alleged that the plaintiff was always in arrears with his rent, and the distress was put in for rent legally due. Defendant contended, moreover, that he had acted in a perfectly *bonâ-fide* manner. The action was an impudent piece of speculative litigation, and all the trouble had arisen from the fact that the plaintiff did not pay his debts, and neglected to observe the covenants in his lease.

In the result the jury found a verdict for the defendant.

Death from Poison after Peppermints.

An inquest was held on February 15, at Peckham, touching the death of a lad named Francis Milton McLean, which occurred somewhat suddenly after partaking of peppermints. Dr. F. Pechin, of Old Kent Road, said he had found in the stomach several ulcers covered with a white substance. Death was, no doubt, due to poison, but he could not say what the poison was without making an analysis of the stomach. The inquiry was adjourned for the purpose of analysis.

Fire.

Whilst Mr. C. Barnes, chemist and druggist, Staplehurst, Kent, was away from home last week a fire broke out on his business premises. Fortunately, the flames were observed by a neighbour, and the local fire-brigade succeeded in putting them out before much damage had been done.

Carbolic-acid Poisonings.

Mary Meredith (33), wife of a railway-guard at Chester, had pawned her husband's best clothes, and when he asked for them to go to a football-match she went upstairs and poisoned herself with a cupful of carbolic acid.

David Thomason (25), a bookkeeper at Bootle, died from the effects of carbolic acid, which he took apparently to get free from pains which he suffered as the after-consequences of an operation he had undergone.

William Stephen Marsh (37), waiter at the Nimrod Club, West-end, who had been drinking very heavily, finished up a bout with a draught of carbolic acid. He said he was so drunk that he did not know what he was doing when he took the poison. He died on February 16.

Disinfectants for Holborn.

At the meeting of the Holborn Board of Works on Monday night, Mr. G. Phillips in the chair, the Sanitary Committee recommended that the following firms be invited to send in tenders for supplying the Board with disinfectants:—Messrs. Corbyn, Francis, Withers, Hopkin & Williams, Poole & Co., Adcock, Easton & Co., Calvert, Morson, Macdougal, and Reid. The report of the committee was unanimously adopted.

An Overdose of Sweet Nitre.

At an inquest held at Nelson, Lancashire, on Monday, it was stated that Mary Ann Hargreaves (54), wife of a former member of the Nelson Town Council, having been addicted to drink of late years, had recently taken to drinking sweet nitre. On Friday last she drank about 16 oz. She was found unconscious in the evening, and died a few hours later. The jury returned a verdict of death from excessive drinking, accelerated by the drinking of sweet nitre.

Adulterated Tincture of Rhubarb.

At Darlington Petty Sessions on Monday, Mary Ann Dobbing, of Fighting Cocks, was summoned, under the Sale of Food and Drugs Act, for selling adulterated tincture of rhubarb. The analysis of Mr. Stock, public analyst to the County Council, showed that, allowing for loss by evaporation, the sample contained at least 40 per cent. of extraneous water. Defendant was simply ordered to pay the costs.

Ammonia Poisoning.

Margaret Hall, a married woman, residing at Winchester, left her home one day last week and went to Southampton. There she visited the shop of Mr. Austin, chemist and druggist, of St. Mary's Street, from whom she purchased threepennyworth of ammonia. Later in the day she was found in the Parks at Southampton apparently suffering, and she said she had taken the poison as her husband ill-used her and she was tired of life. She recovered, however, sufficiently to be brought before the Magistrate the next morning. Mr. Austin, in evidence, said the woman informed him that she wanted the ammonia to clean some cloth. He supplied her with powder first, but she asked for the liquid, and he supplied her with 6 drachms. The husband also attended, and denied that he ill-used her. The prisoner was remanded, as she was still suffering from the effects of the poison.

An Overdose of Chlorodyne.

At Manchester, on Tuesday, William Woodcock, a middle-aged man, employed as a watchman, who suffered from lung-disease, took an overdose of chlorodyne and died in Ancoats Hospital.

The $\frac{1}{85}$th of a Grain of Morphia Fatal.

An inquest was held last week with reference to the death of Florence Annie Phillimore, aged 17 days, daughter of a smith's hammerman living at Wandsworth, who died on January 13. The case had been adjourned at the request of Mr. Macdonald, an unqualified medical assistant, who had prescribed for the child. At the previous inquiry it was stated that the post-mortem showed traces of narcotic poisoning. Since then the remainder of Mr. Macdonald's medicine had been analysed and found to contain no mineral or organic poison. Dr. Womack expressed the opinion that the 85th part of a grain of morphine found in the child's stomach had been administered independently of the medicine. The Coroner elicited from the mother that she had given the child a little brandy, which was taken from a bottle that had contained cough-mixture. Dr. Womack said that was quite sufficient to account for the morphine he found. The jury returned a verdict of death from natural causes, and exonerated Mr. Macdonald, who holds Canadian diplomas, from all blame.

Irish News.

Alleged Strychnine Poisoning by a Wife.

At Banbridge, County Down, on Saturday and Monday last, Mrs. Jane Jordan was brought up in custody and charged with the murder of her husband, who died on January 13, by poisoning him with strychnine contained in some rat-poison. Personal servants having described the death of Mr. Jordan after a fit, Alexander Andrews, druggist, Banbridge, deposed that in his poisons-register he found on November 14, 1892, an entry for the sale of threepennyworth of strychnine for rats to Mrs. Jordan. The quantity was 20 grs. Dr. Hawthorne stated that he believed the cause of Mr. Jordan's death was poisoning, the effect of strychnine. Professor Hodge, J.P., public analyst, said that from a portion of the contents of the stomach of the deceased he was enabled to separate a crystalline substance having all the characteristics of strychnine, which he was also able to detect in other portions of the viscera. He agreed with Dr. Hawthorne that the symptoms described by the witnesses were those of poisoning by strychnine. According to the best authorities $\frac{1}{4}$ gr. had been known to cause death in an adult. Witness found more than that quantity. Evidence was also given of the frequent quarrels between the prisoner and her husband, and one of the servants, Sarah Pool, deposed that after the husband's death, she, at Mrs. Jordan's request, put into the fire a packet which Mrs. Jordan said contained strychnine for rats. The prisoner was committed for trial on the capital charge, defence being reserved.

Scotch News.

Fire at Dumfries.

Last Saturday the three-floor warehouse of Mr. R. Carruthers, pharmaceutical chemist, Dumfries, used for storage, was completely gutted by fire. A young apprentice (only at the trade a week) went to draw off some turpentine, and an older one went with him. The morning was dull, and while the older apprentice had gone out for a moment the younger one lighted a match to see what he was doing, and thoughtlessly threw down the match on some sawdust which happened to be saturated with turpentine. The blaze that ensued was terrific, but thanks to the efforts of the fireman it was confined to the warehouse. To Mr. Carruthers' porter (Mr. H. Murphie) a great deal of credit is due for the manner in which he directed the operations of those engaged in extinguishing the fire. He knew where all the dangerous combustibles were stored, and was thus able to render invaluable assistance. Mr. Carruthers' stock has been almost completely destroyed, and the greater part of what has been only partially affected is in such a condition as to be practically useless. The damage is estimated at about 2,000*l.*

French Pharmaceutical News.

(From our Paris Correspondent.)

News in Brief.—The inquiry concerning the state of the French navy continues and the English system of naval pharmacy is held up as being the nearest to perfection that exists.—M. Gilbert, pharmacien, of Moulins, has received half of the Barbier prize, from the Academy of Sciences, for his work "Pharmacy through the Centuries."—M. Mussat, secretary of the General Association of Hospital-Pharmacists, and M. A. Fumouye are among the recipients of the Cross of the Legion of Honour, while ten pharmacists have been named "Officers of the Academy" for various services rendered.—The well-known M. Adrian is President of the Paris Society of Therapeutics for 1894, and M. Ferrand occupies the vice-chair.—Dr. F. W. Evans, the famous millionaire American dentist, has started a home in Paris for young lady artists, but has fallen out with the ladies' committee of management, and does not seem altogether to have the best of the controversy.—While English pharmacists at Nice seem to be having a very good season, their colleagues in Paris complain that business is slack. This is attributed to the absence of the foreign, and especially the American, element from the capital.

Pharmaceutical Specialities.—A French financial newspaper has drawn the attention of its readers, as a novelty, to the branch of pharmaceutical specialities as having the place of honour amongst the various industries which require very little capital, and may, in spite of this disadvantage, produce enormous profits. This fact is attributed to the circumstance that the most sceptical patient will give way, in spite of himself, to the temptation to try a remedy which has been recommended by the faculty and thus become celebrated. Some interesting figures are given of the principal fortunes made out of specialities. Thus we are told that the Peptofer de Jaillet was bought for a moderate sum and now gives its proprietor an income of 24,000*l.* per annum. The Vin de Bugeaud is said to produce a profit of 18,000*l.* a year, and Chassaing's Wine more still. The financial newspaper in question especially dwells on the subject of antiseptics and disinfectants. It regards their possibilities in the matter of sale as unlimited, and says that "it is for intelligent capitalists to profit by this state of things, and to obtain a large profit for a moderate outlay." Possibly an enterprising manufacturer is about to start a limited liability company and is preparing the way: "things are done thusly" in France.

Municipal Pharmacies—The municipality of Roubaix, the holy city of socialism, seems to consider that everything is permitted in it because the town can boast of the largest revolutionary majority in France. The conflict in which the Council is engaged with the Prefect of the North has entered on a new phase by the former voting for a third time the creation of a municipal pharmacy in which all medicaments are to be sold at a small margin over cost price. Twice already the Prefect has exercised his prerogative by cancelling the Council's votes, not because he has any specified sympathy with pharmacy or pharmaciens, but for the simple reason that it is in direct contradiction to the law for a municipality to trade in any manner whatever, even with a philanthropic object. Now, it appears, the subject is to be brought before Parliament, and M. Jules Guesde, the leader of the socialist party, is said to have undertaken the task. He proposes to support his case by a mass of documentary evidence concerning pharmacists who make too much profit, and those who sell cheaply, but supply inferior medicaments; it is understood that he will leave judiciously alone the majority of the profession who are striving hard to make a bare living. Needless to say that by this time the socialist journals are up in arms against the tyranny of the French Government which has delivered the 100,000 inhabitants of Roubaix to the philistines of pharmacy whose fraudulent commerce it encourages.

Pharmaceutical Profit-sharing.—As a rule, the relations between pharmacist and medico are no more fraternal in France than in most other countries, although in the Republic the law, by prohibiting the one from poaching upon the other's preserve, does its best to minimise the points of possible collision. But though the French medical man may not dispense, there is nothing to prevent him from prescribing So-and-so's specialities, and thus establishing a bond of communion between himself and the manufacturer, to the detriment of the local pharmacien. An ingenious "profit-sharing" circular, which has just been issued to all the medical men in France, was published in the *Journal des Débats* last week. It proposes a scheme similar to one to which we referred in the *C. & D.* about a year ago. The medical man is to prescribe, where he can, the maker's specialities (the latter, by the way, is a pharmacien), and to inform him in writing of his preparedness to do so. His name is thereupon inscribed in a book, with a distinguishing number added to it. At the end of each year the pharmacien will cause ten numbers to be drawn by lot out of the whole of the numbers inscribed on his list. The first number drawn will entitle the medical man whose name appears against it to a prize of 50,000f.; the second receives 10,000f.; and the eight next following, 5,000f. each. This, says the pharmacien, is the equivalent of the amount annually spent by the average proprietor of specialities in advertising. If 1,000 out of the 16,000 physicians in France will undertake to prescribe the maker's goods on the average once a day, he reckons that his scheme will pay. He does not suggest how he is to get over the difficulty that the publicity of the winning doctors' luck would cling to their reputation like a Nessus-shirt, and probably discredit them with their patients for ever.

Toper: "What shall I take, doctor, to remove the redness from my nose?" Doctor: "Take nothing—for three months.

Foreign and Colonial News.

CARAWAY OIL AS A SUICIDANT.—A Berlin young man has been trying to commit suicide by swallowing five ounces of caraway oil. He succeeded in burning his mouth, stomach. and the rest of the intestinal canal, but the doctors hope to pull him through.

JENSEN'S PEPSIN PATENT.—The Carl L. Jensen Company has recently proceeded against John Clay, New York manager for Parke, Davis & Co., for alleged infringement of the Jensen patented process for producing pepsin, and Judge Achison, of the U.S. Circuit Court for the district of New Jersey, has decided in favour of the defendant.

"HANDS UP" IN A PHARMACY.—Indianapolis is a lively place. Last month four men entered a drug-store at a street-corner about 6.30 P.M., and as the assistant advanced to wait on them each pulled a revolver and pointed straight at his head, ordering "hands up." One went to the till, took out $6 and several dollars' worth of stamps, and then all backed out.

A PHARMACEUTICAL JUBILEE.—On February 11, Dr. Anton von Waldheim, of Vienna, celebrated the twenty-fifth anniversary of his presidency of the Vienna Pharmaceutical Union. Dr. von Waldheim has also for many years been the President of the Austrian Apotheker-Verein. A pharmaceutical deputation waited upon Dr. von Waldheim to offer congratulations on behalf of his fellow-pharmacists.

THE CHOLERA IN TURKEY.—An official communication has been published in the Turkish papers to the effect that in consequence of the recrudescence of cholera it has been decided to appoint a commission to ascertain the causes of the revival of the disease; to take measures for the strict enforcement of all the prophylactic and sanitary measures prescribed by the law; and to provide all military barracks, public administrations, schools, hospitals, &c., with boiled water; continue to apply the measures of disinfection; prevent the sale of unwholesome fruit and any other food, &c.

MISFORTUNES NEVER COME SINGLY.—The stock of Hegeman & Co.'s drug-store, at No. 196 Broadway, New York, was ruined and the store made untenantable by a fire on January 27. Three days later another fire broke out and finished the wreck. George Ramsay, secretary and general manager of the firm, was sitting with an insurance salvageman in the rear of the store at 7 o'clock on the evening of the second fire when they saw smoke rising from the upper floors, and there found that the back of the two top floors of the next-door house was aflame. Thence the fire quickly spread to the partially burnt-out house and destroyed it completely. Hegeman & Co. estimate their loss on both fires at $80,000.

AN EXHIBITION OF PHOTOGRAPHY.—A subscriber in Milan sends us a programme of an International Exhibition of Photography which will be held in that city, as part of a "United Exhibitions" scheme, from May to October of this year. The list of patrons of the exhibition includes several names of eminence in the photographic world, and six influential Italian photographic societies have promised their co-operation. It it now seven years, say the promoters, since the first exhibition of photography was held in Florence, and since that time photography has made so much progress that it is desirable to compare its latest achievements by a new international show. The exhibition will consist of three classes—viz., (1) professional photography, (2) amateur photography, (3) technical and industrial processes connected with the art. Applications for space and information should be addressed to the Comitato Speciale per la Esposizione di Fotografia, 30 Via Principe Umberto, Milan, Italy. Information will be supplied, if required, in English.

THE NEW BENGAL VETERINARY COLLEGE.—The Bengal Veterinary School in Calcutta is now at last in working order. Notifications have been issued in the official *Gazette* stating that the establishment is ready for the admission of students, and a useful career is anticipated for the school. It is now more than twenty-five years since the foundation of such an institution was approved of by the authorities, but various untoward circumstances stopped the realisation of the plan. About a year ago a wealthy native, Baboo Shew Bux Bogla, came forward and offered 30,000r. and a plot of ground to the Government of Bengal, while Sir Dinshaw Manekjee Petit, Bart., of Bombay, made a further contribution of 25,000r. towards the establishment of a hospital for animals to be attached to the school. In April, 1893, the foundation-stone was laid by the Lieutenant-Governor, Sir Charles Elliott, and the buildings are now completed. The whole cost of their erection, we have been informed, has been about 80 000r. They consist of a veterinary school, which contains a large lecture-room, pharmacy, assistant-superintendent's office, dressing-room, superintendent's office, museum, library, reading-rooms, and residence for the assistant-superintendent. The hospital consists of out-houses, four cattle-wards to contain sixty head, four horse-wards to contain thirty-four animals, and seven loose boxes which are segregated, in which are put cases which may be of a suspicious nature There is also a well-ventilated dissecting-room and an operation-shed, to which is attached a covered run. The classes will be open to all nationalities, but the teaching is in English. During the first year the Government of Bengal offer fifteen scholarships of 5r. each per mensem, and every succeeding year thirty have been promised. It is the intention of Government after a certain time to appoint as veterinary surgeons in Government positions only persons holding the diploma of the new College.

A CHEMIST'S CENTENARY.—On Wednesday, February 8, the centenary of the birth of Friedlieb Ferdinand Runge, the discoverer of aniline, carbolic acid, and the paraffines of coal-tar, was celebrated at Oranienburg, near Berlin, by the unveiling of a memorial tablet in the wall of the present Royal Seminary, which occupies the place where formerly stood Runge's laboratory. Runge was a native of Billwärder, near Hamburg, where his father officiated as clergyman, and, having chosen pharmacy as a career, entered the Raths-apotheke in Lubeck as an apprentice. When 24 years of age, Runge, then a student at Jena, distinguished himself by discovering the effects of belladonna, hyoscyamus, and datura upon the pupil of the eye, a subject which brought him into acquaintance with Goethe, who took a certain amateur interest in natural science. In 1819 Runge took his M.D. degree at Jena, and in 1824 that of D.Phil. in Berlin. After spending some years in the Prussian and French capitals, and visiting Holland, Switzerland, and England, Runge became Professor of Technology at Breslau, but afterwards vacated his chair to become chemist to the "Preussische Seehandlung," at that time a famous commercial and industrial company. It was while engaged in the service of this concern at the Oranienburg factory that Runge made his name known all over the world in connection with his work on the dry distillation of coal-tar, in the course of which he succeeded in separating the body now known as aniline, but which he called "kyanol," and by his writings on the chemistry of dyes. Before entering the service of the Seehandlung Runge had already made a name for himself by his action at Breslau during the severe cholera-epidemic of 1831, when he was charged by the city authorities with the management of the disinfection measures. Runge remained with the Seehandlung until 1848, when the company sold their Oranienburg factory. Seven years later Runge, who did not get on well with the succeeding proprietors, resigned the technical management and retired upon his Breslau professional pension of 60*l.* a year until his death, in 1867. "Kyanol," or aniline, was discovered by Runge in 1833, who named it from the violet colour which it assumed when brought into contact with chloride of lime. In the same year Runge discovered carbolic acid and rosolic acid. Runge may be regarded as the founder of the German lead-pencil industry, which owes its rise to the publication, in one of Runge's books on chemistry, of a process for the purification of graphite with sulphuric acid. Previous to this publication only English plumbago was used in Germany on account of its superior purity. Runge's process was afterwards improved by Professor Brodie, of Oxford. The isolation of palmitinic acid from palm oil, and its first use in the candle-industry, is also due to Runge.

Legal Reports.

WHAT IS MUSTARD?

THE Cardiff Stipendiary, Mr. T. W. Lewis, decided some months ago that if a purchaser asked for mustard he must be supplied with pure flour of mustard, and not mustard with a mixture of wheat flour. He prepared a case on that occasion, but the defendant's solicitor did not take it up. Another case was brought before him on Friday last, and it was stated that twenty-two samples had been taken in the town. In this case the analyst said there had been an admixture of 8 per cent. of wheat flour. For the defendant it was stated that, without his knowledge, some mustard got upset out of a tin and was put into a drawer. The inspector came in and asked for mustard. The assistant sold this to him. In a similar case heard by the Long Ashton Magistrates, at the end of last year, in which 8 per cent. of wheat flour had been added to the mustard, Sir Edward Fry dismissed the summons, and similar decisions had been given by other magistrates all over the country.

The Stipendiary said he went into this matter two years ago, and came to the conclusion with considerable confidence that if a person asked for mustard he was entitled to have pure mustard, and that if he did not receive it, it was an offence within the meaning of the Act. He also came to the conclusion that an admixture of wheat farina was not necessary for the preparation of mustard as an article of commerce. The only thing that made him hesitate now was this decision of the Bench of which Sir Edward Fry was a member. He ultimately, however, fined the defendant 20*s.*, and costs.

THE MALT BREAD PATENTS.

THE action brought in the Court of Session, Edinburgh, by James Montgomerie of Partick, against William Paterson, and Paterson's Chemical Manufacturing Company, of Glasgow, has now been decided by Lord Kyllachy. Particulars of the action were given in THE CHEMIST AND DRUGGIST, January 20. The pursuer alleged that defendants infringed his patents for the manufacture of malt bread, and that they had infringed a contract entered into by him and them. His Lordship agreed with pursuer in regard to the infringement, so far as the defendants' patent was concerned, but on the question of defendants giving people a licence to manufacture malt bread, he did not feel disposed to hold that a person who did no more than give another person a licence to infringe a patent was himself an infringer. As there was no proof of any use by the defenders of either the one process or the other, he could not grant interdict or damages for infringement. In respect to the issuing of advertisements or circulars he also decided in defenders' favour. So that on the whole his lordship found for pursuer's patent as against that of the defenders, and *quoad ultra* assoilzied the defenders, but found them liable in two-thirds of the pursuer's expenses.

OXALIC ACID IN A BASS'S BEER-BOTTLE.

A CASE was tried in the High Court last week in which a Mr. Davis sued a dealer in the Fulham Road for damages for selling to him a bottle supposed to be Bass's beer, but actually containing, it was alleged, a solution of oxalic acid. The defendant had obtained the beer from other agents, but there was no imputation on Messrs. Bass. Mr. Longstaff, analytical chemist, Fulham, gave evidence in support of the plaintiff's case. For the defence it was argued that there was no implied warranty that a bottle labelled "Bass & Co.'s Pale Ale" contained beer; there was only a warranty that the bottle contained a fluid which Messrs. Bass called ale. He also submitted that under the Merchandise Marks Act the only warranty was that the label was not a false label, not that the bottle contained beer. Mr. Justice Lawrance held that the label constituted a warranty that the bottle contained Bass's beer, and gave judgment for the plaintiff for 20*l.* damages, that being the amount found by the jury to be the damage incurred if there was a legal claim.

PEARL COCOA.

MR. THOMAS JONES, a grocer at Pentre, in December 1892 sold to Mr. Evan Jones, inspector under the Sale of Food and Drugs Act, a ¼-lb. packet of Pearl Cocoa (Messrs. Fry & Sons' manufacture) for 2*d.* Mr. Morgan, public analyst, Swansea, found that the Pearl cocoa consisted of 30 per cent. of pure cocoa and 70 per cent. of sugar and starch. The shopkeeper was summoned for selling an adulterated article and fined 1*s.* and 1*s.* costs by the Stipendiary Magistrate sitting at the Ystrad Police Court. There was an immediate appeal to Quarter Sessions, Messrs. Fry being represented. The appeal was heard before two Magistrates, who held opposite opinions, and so the conviction remained. The real question now before the Court was whether the conviction could be maintained. On Wednesday the case came before Justices Mathew and Cave sitting as a Divisional Court.

Mr. Grain, for the appellant (Mr. Thomas Jones), did not deny the accuracy of Mr. Morgan's analysis, but stated that the starch and sugar were added to make the article one of commerce. This "Pearl" cocoa had been manufactured and sold for upwards of thirty years, and the price at which it was sold (8*d.* per lb.) when compared with the price of cocoa nibs showed that the purchaser was not defrauded. In delivering to the customer the packet wrapped up in the paper the shopkeeper had committed no offence, for the ingredients of the article were properly described and the wrapper affixed to the packet. Mr. Stephens, for the respondent, supported the conviction. He said when the packet of Pearl cocoa was purchased, the purchaser had no opportunity of reading the label.

Mr. Justice Mathew: Is that quite fair? You lay a trap for the unfortunate shopkeeper. You say, "I know very well what is on the label, but as you have wrapped the packet up in paper, I will get you convicted."

Mr. Stephens: If we did not so act we should never get a conviction.

Mr. Justice Mathew: Oh, yes, you would. If the article is an adulterated article within the meaning of the Act, and if you do not apprise the public, you can secure convictions. You knew what was on the label, but you come before the Court and say an offence has been committed because the packet has been wrapped up in a piece of paper.

Mr. Stephens then argued that an offence had been committed because more farinaceous food had been put into the cocoa than was necessary, and had been so added in order to increase its bulk.

Their Lordships held that the conviction by the Stipendiary Magistrate was wrong. The packet of Pearl cocoa was labelled with a notice informing the purchaser that it was made up of certain ingredients, and so there was no fraud within section 6 on the part of the manufacturers or vendor. The shopkeeper sold the packet wrapped up in a piece of paper, and it was said that this brought the article within the provisions of the Act. This was absurd. The conviction must be quashed, and the appeal allowed, with costs.

Personalities.

MR. H. B. MASON, son of Mr. A. H. Mason, New York, has returned to London as a representative of Messrs. Oppenheimer, Son & Co. (Limited), Worship Street, E.C.

MR. ROBERT MACALLEY, who was in the retail business in Edinburgh for a number of years, is now representing Messrs. Oppenheimer, Son & Co. (Limited) in the Midlands.

ACCORDING to the *Sun* much of Mr. Mitchell Henry's wealth was made out of the sale of "Henry's Magnesia," in which he was largely interested. It is not generally known that he practised the medical profession for some time; but the greater portion of his money was made in the Manchester cotton-trade.

MR. WELLCOME (of Burroughs, Wellcome & Co.) is presenting to the Senate of the United States the portrait of Pocahontas which hung in the library of the Woman's Building during the Columbian Exposition. This portrait of Pocahontas was painted from life after she was converted to Christianity and became Mrs. Rolf.

The Winter Session.

CHEMICAL SOCIETY.

THE walls of the Society's lecture-theatre on Thursday evening, February 15, were almost completely covered with huge tables of figures; there was a large attendance of Fellows, and some were present who are rarely seen at the meetings. Sir Henry Gilbert, for example, had come from Rothamsted, and with him Mr. Warington, his colleague, while there were also noticeable several analysts who have an intimate connection with agriculture. Dr. Bernard Dyer's paper on the analysis of soils was the attraction, but before it came on several items of business had to be transacted, in anticipation of the

ANNUAL MEETING.

First, there were the auditors to appoint, and for this duty Messrs. E. W. Voelcker, E. J. Bevan, and T. A. Lawson, Ph.D., were duly nominated. The PRESIDENT then intimated that the Council recommended for election as Vice-Presidents Mr. Horace Brown and Dr. Ludwig Mond, and as members of Council Messrs. A. G. Green, F. S. Kipping, D.Sc., Thomas Stevenson, M.D., and Sydney Young, D.Sc. Scrutineers for the evening's ballot were appointed, and the way was clear for Dr. Dyer to tell what he had done in regard to

THE ANALYSIS OF SOILS.

We shall only indicate generally the nature of the research. Dr. DYER commenced by pointing out that the methods of analysis in use are more or less arbitrary, and not considered by anybody to be satisfactory. What the farmer wants to know is a reply to the question, What is the available mineral plant-food in the soil? and analysts have not given a precise answer to this question. Generally a known weight of the soil has been stewed with hydrochloric acid, and the phosphates and potash estimated in the extract then obtainable from the stewed mixture by washing with water. Water alone without acid could not give an adequate representation of the available food, but the use of ammonium-citrate solution, and later of citric-acid solution (1 per cent.), have been suggested. The latter proposal caught Dr. Dyer's fancy, but the strength of the solution was arbitrary, and he set to work to see whether it was near the natural standard—*i.e.*, the acidity of plant-juice. Accordingly he determined the acidity of the rootlet-juice of 100 plants, representing 59 species and 20 natural orders, and found that though the range was wide, the average acidity was 0·85 per cent. in terms of citric acid. A 1-per-cent. solution of citric acid was, therefore, fairly close to the natural requirement, and the method of analysis adopted was to macerate 500 grammes of the air-dried soil in 2 litres of the acid solution for a week, and from a litre of the clear solution to determine the constituents. The most interesting point about the research was that the samples of soils were taken from the Hoosfield barley-fields at Rothamsted, which have been for forty years under known conditions of cultivation: the actual amounts of manure put on are known, as well as the weights of grain and straw taken off and their composition. Samples of the soil to a depth of 9 inches were taken from about 40 plots, and Dr. Dyer's analyses brought out a number of interesting points which were but lightly touched in his verbal summary of the communication. The figures showed that the 1-per-cent. solution of citric acid gave a wonderfully close approximation to the available mineral plant-food; for calculation of the total phosphates and potash in the soil, the amounts available, the amounts added as manure, and the amounts withdrawn by the crops showed that while the figures given by the old way of analysis told nothing, those of the new way gave a fair indication of the "available food."

Professor ARMSTRONG, in opening the discussion, said the paper was one of the highest importance, and it had a direct bearing upon that crucial question of "unexhausted improvements" in agriculture.

Sir HENRY GILBERT then spoke for fully half an hour on the historical side of the question, and added some comments upon the paper which indicated that Dr. Dyer's results would be more important when he attacked the soil of the wheatfields. He was followed by Mr. WARINGTON, who expressed himself guardedly as to the value of the paper, and put forward some objections to it. Mr. LLOYD, Dr. VOELCKER, Mr. HUGHES and others spoke, all of them being more or less critical.

Dr. DYER then replied. By this time it was 10.30, and the PRESIDENT having announced the result of the ballot, which showed that half-a-dozen candidates were rejected, amongst them three connected with pharmacy, the rest of the papers were taken as read.

LIVERPOOL CHEMISTS' ASSOCIATION.

THE first general meeting of the forty-fifth session was held at the Royal Institution on February 15. Mr. J. J. Smith (President) occupied the chair.

TASI-ROOT.

A specimen of tasi-root (*Morrenia brachystephona*) was shown by Mr. T. H. WARDLEWORTH. The plant grows freely in the internal provinces of the Argentine Republic, and the root is largely employed with success as a galactogogue. When fresh the root is of considerable size but in drying shrinks very much. An alkaloid of piquant odour and bitter taste has been obtained from it, and has been named "morenina." Drs. Aratadel, Arca, and Sicardi have been experimenting with it, and consider it a most valuable drug in cases of the failure of milk in mothers.

Mr. R. C. COWLEY read a thoughtful paper on "The Origin of Species in Plants," following generally the Darwinian theory. A third paper was on

OLEATES, P.B.

By Edwin Williams.

He said: We have two official oleates and a number of oleo-palmitates, such as lead plaster, ammonia liniment, carron oil, hard soap, and oleo-stearate as curd soap, each and all of indefinite composition. I will confine my remarks to what are classed as oleates in the B.P. The formula for real oleates is $M'C_{18}H_{33}O_2$ or $M''(C_{18}H_{33}O_2)_2$ according to the quantivalence of the metal. There are likewise acid oleates. The oleates dissolve in cold absolute alcohol, ether, and petroleum benzine, a property by which they may be distinguished and separated from the palmitates and stearates.

Oleates were expected to replace in the Pharmacopœia a great number of inert ointments now in use. A medicament dissolved in one will prove more efficacious by penetrating deeper into the tissues than an insoluble powder distributed on the surface. That the oleates have not found that important place anticipated for them is possibly largely attributable to the fact that our oleates are not worthy of the title, being simply a solution of the metal or oxide in oleic acid. They are of indefinite strength, and most of the samples that I have obtained contained palmitate or stearate, derived perhaps from the impure oleic acid, although some samples contained sufficient of these impurities to warrant my saying that they were derived from the soap that they had been precipitated from.

Oleate of mercury is the oleate most in demand. I find it a most unsatisfactory preparation. When the proper amount of oxide has been added, and the B.P. directions followed, it often takes seven days—sometimes longer—to form a solution, which, in my opinion, indicates that it is not a true oleate. The oleic acid which is in excess soon begins to take up the oxygen, reducing the mercury first to suboxide, which is shown by the change of colour from light brown to slate colour, and ultimately the whole of the oleate becomes metallic mercury. It takes long to make, and after it is made it is not what it is represented to be. This instability causes trouble to the dispenser, as it prevents him sending out the article always of the same consistency, appearance, and therapeutic strength.

The only way out of the difficulty that I can see would be a modification of the B.P. process, whereby you could make it in a short time. A method that I have found to answer is to place the mortar in a pan of boiling water, placing the weighed oleic acid in the mortar, and maintaining the heat until the oleic acid is about 100° F., then dusting the oxide of mercury into it, afterwards stirring until a solution is effected, which takes about fifteen minutes. The oleic acid must not be subjected to a great heat, as heat favours the absorption of oxygen, causing it to smell disagreeably and become rancid. I found that oleate of mercury 10 per cent. made in this manner would keep a month and retain its characteristics. A stronger solution will keep much better, as the excess of oleic acid is the cause of deterioration, owing to its reducing properties.

A true oleate should be made by precipitation and diluted as required. A good method is to make a saturated solution of Castile soap in water, allowing it to stand for a day to get rid of some of the sodium palmitate, which will deposit, decanting the clear solution and filtering. The filtrate will be composed principally of sodium oleate with some palmitate. Make a solution of a neutral salt of the metal, and precipitate the oleate by reacting on the soap solution. The solution of the metal must not be acid, or we should get some free oleo-palmitic acid. In the case of mercury we should require to keep it boiling briskly for two or three minutes to aggregate the particles. This precipitate —an oleo-palmitate of the metal—can be strained and adherent water got rid of by evaporation in the water-bath.

The oleate may be separated from the palmitate by dissolving out with petroleum benzine or ether, which will dissolve the oleate but not the palmitate. The filtered benzine solution evaporated will yield the oleate in a fair state of purity. This I would call a real oleate, and not a mixture or a solution of the metal in oleic acid. It could be diluted to any strength with lanoline, spermaceti ointment, or even oleic acid.

BRIGHTON ASSOCIATIONS OF PHARMACY.

The third of a series of musical evenings, held under the auspices of the combined Senior and Junior Associations in Brighton, took place on February 14, at the Clarence Rooms, Hotel Metropole, Mr. W. H. Gibson, F.C.S., occupying the chair, and Mr. C. G. Yates the vice-chair. The company numbered about 250.

CHEMISTS' ASSISTANTS' ASSOCIATION.

At the meeting held at 103 Great Russell Street, on Thursday, February 15, a paper was read by Mr. E. White, the newly-appointed examiner, on

The Preservation of Infusions.

The preservation of infusions is dependent on the exclusion of various low forms of organisms (chiefly mould and bacteria) or upon their destruction, as by the addition of antiseptics, such as alcohol, &c.—the latter course being, in the author's opinion, inadmissible.

(1) *Without Antiseptics.*—Mr. White described some methods he had adopted for the sterilisation and preservation of infusions that were entirely successful. In some experiments made previously in order to demonstrate his results to the meeting, a small flask was taken, some distilled water introduced and boiled for ten minutes, ensuring complete sterilisation of the flask; the infusion was then strained into the flask and the neck immediately closed with sterilised cotton wool. If in any cases it might be thought admissible the infusion might be boiled for one minute after its introduction into the flask. Samples of infusions of gentian, ergot, and buchu made in this way kept perfectly for a long time.

In the case of cold-water infusions, such as calumba and quassia, filtration through the kieselguhr block of a Berkefeld filter into a sterilised flask was recommended; this treatment had also proved successful. Flasks being inconvenient for keeping these preparations, Mr. White had devised bottles with taps at the bottom, and the mouth closed by a rubber cork through which a thistle-funnel, plugged with sterilised cotton wool, passed. Rinsing several times with sterilised water before adding the infusion is sufficient sterilisation if it be not required to keep more than a month.

(2) *Preservation by Antiseptics.*—The addition of antiseptics to ordinary infusions is inadmissible. Concentrated infusions contain, as a rule, 15 to 20 per cent. of rectified spirit, the objections to the use of which are its cost and the alteration of the physical character produced by its addition. Chloroform is, from his experience, an equally good preservative, much less costly, and does not alter the physical characters of the preparation. One in 400 is sufficient to add.

The President said concentrated infusions had often been condemned, but it was sometimes inconvenient to make fresh ones. Mr. White's method did away with all this trouble. Were all spores killed when the boiling water was poured on the drug, when the infusion was made, or would any resist that temperature, which would be below 212° F.? Concentrated infusions were generally boiled and then evaporated down, a *modus operandi* sure to cause the deposition of matters which ought to be present. Chloroform was not added until after this treatment, and although it might not, like rectified spirit, cause a further precipitation, the use of the concentrated preparation was not admissible. Mr. Eynon agreed that chloroform was a valuable preservative. Concentrated infusions were made too strong. A strength of 1 in 2, with a minim of chloroform to 1 oz., was a convenient strength. When a mixture was dispensed containing no preparation of chloroform, it was a good plan to warm the infusion to evaporate it from that. Mr. Bird said this method seemed to be a very satisfactory way of preserving infusions. There was no difficulty in carrying out the operations, and the apparatus necessary was very simple. Had Mr. White noticed any change in the aroma of an infusion that had been kept? It occurred to him some oxidation of the essential oil might occur. Messrs. Dunning, W. A. Jones, Roe, and Davies having taken part in the discussion, Mr. White, in reply, said that at the temperature of making the infusions, very few germs would withstand the treatment. Heating the infusion to boiling-point after introduction into the sterilised flask ensured complete sterilisation. Most concentrated infusions were now made by continuous percolation through a series of percolators. They could be made much cheaper if chloroform were used as a preservative instead of rectified spirit. If made weaker than 1 to 8, they required the same amount of chloroform to preserve them, so that when diluted they would contain more. The cotton wool for introducing into the sterilised flasks could be sterilised by immersing in boiling water or by heating dry to 150° C., when a slight charring would occur, which, however, would not be a disadvantage. The best kind to use was the non-absorbent.

The Annual Dinner

of this Association is to be held at the Cannon Street Hotel on March 8, at 8 p.m., Mr. T. H. W. Idris, J.P., L.C.C., in the chair.

GLASGOW AND WEST OF SCOTLAND PHARMACEUTICAL ASSOCIATION.

At the fortnightly meeting of this Association held on February 15—Mr. W. L. Currie presiding—a discussion on

Dispensing Notes and Queries

was introduced by Mr. Alexander Boyd, Pollokshields. His first point, he said, was a question of pharmaceutical law. He pointed out that when dispensing a prescription containing a scheduled poison the labelling regulations were not enforced provided that the prescription be copied into a book kept for that purpose, called the prescription-book, with the name of the party for whom the medicine is intended. Suppose such a prescription to be repeated, would it be necessary to copy it again or retain a note that it had been re-dispensed? Mr. Boyd next referred to the solution of dialysed iron. The B.P. said that this solution should give no precipitate with either solution of ferrocyanide of potash or solution of nitrate of silver. He had examined many specimens, but had never come across one that did not give a precipitate with either of those reagents. Dialysed iron was sometimes prescribed with liquor arsenicalis, and when those two were mixed a precipitate occurred. An acid solution of arsenic with solution of dialysed iron yielded no precipitate. The precipitate must be caused by the potass. carb. They used acid solution of arsenic when liquor arsenicalis was prescribed along with solution of dialysed iron. Many excipients had been recommended for making creosote pills. Magnesia was now discarded, he thought, for that purpose by every intelligent pharmacist. Creosote pills made with magnesia did not contain creosote in unaltered form. Chemical combination took place between the magnesia and the creosote, and the result was an insoluble mass not consistant with the intentions of the prescriber. Mr. Martindale's formula met the case well. A still simpler way was to put soap and creosote into a mortar which had first been well warmed with boiling water, and beating together till they combined. Creosote was a valuable therapeutic agent, but it was very apt to cause sickness and nausea when given for a time. The pill was the best form for its administration, and if they had to be given for a length of time they should be keratin-coated. That prevented the nausea to a great extent. Should they do that without the order of the physician? They might at least suggest it to him. What was the best basis for some kinds of urethral bougies? Cocoa butter was an excellent basis for certain kinds, but for some combinations, especially in warm weather, it was too soft. Wax was not a desirable addition. If white wax or stearine were added, the purest should be used, as these were often adulterated with hard paraffin, which had a very high melting-point. Whatever basis was used its melting-point should be adjusted to blood-heat. The author concluded by alluding to two mixtures which he had lately dispensed. One contained magnesia and chloride of ammonium. In this case the magnesia decomposed the chloride of ammonium, giving rise to free ammonia in the mixture. The other contained perchloride of iron, chlorate of potash, and sulphate of magnesium. This produced a beautiful green solution in which a white precipitate was slowly formed. On collecting this precipitate after washing, he found it charred, when heated with sulphuric acid.

Mr. J. A. Russell produced solutions of chlorate of potash 1 in 16, crystals and powder, to show that the crystals were more soluble than the powder. Powders were likely to lose their water of crystallisation, as they exposed a greater surface than crystals. He found ferri sulph. that had been kept for some time in powder more easily worked with in making pills such as Blaud's.

Mr. Thomas Dunlop referred to the coloration in salicylate-of-potash solutions in the presence of ammonia. He found this was due to the carbonate of ammonium, and that it developed more rapidly in a natural salicylate than in a physiologically pure one. An addition of 1 gr. of hypophosphite of soda to a 6-oz. mixture kept it quite clear.

In the subsequent discussion Mr. Dunlop was thanked by the members for his contribution to the subject, most of the speakers stating that they had experienced some trouble with salicylate mixtures.

Mr. Brodie asked for information as to the dispensing of a gargle, frequently prescribed, containing chlorate of potash and hydrochloric acid.

Mr. McKellar said the doctors meant chlorine to be developed. The chlorate was put into a bottle, strong acid dropped upon it, and the fumes of chlorine allowed to develop before adding water. Mr. McKellar also alluded to a mixture containing hydrogen peroxide and carbonate of sodium. These produced great effervescence, which continued for a considerable time, even while the mixture was being taken by the patient. It was used in cases of diphtheria.

Mr. Thomas Lawrence referred to an eye-lotion, which had lately been dispensed by him, containing cocainæ hydrochlor. and liquor potassæ. The potash threw out the cocaine. Upon consulting the prescriber the latter told him that the lotion in question had been used before and had done much good.

With reference to the point of law touched upon by Mr. Boyd, the President said it was his custom to re-copy all mixtures containing poisons, so that the date of repetition could be given to the physician. In closing the discussion he said they had spent a most valuable evening. He also remarked that they, as dispensers, were much indebted to The Chemist and Druggist for the "Dispensing Notes" which appeared in that journal. Although personally he did not, perhaps, always think alike with The Chemist and Druggist upon some things, he must say that he had found its "Dispensing Notes" very useful in solving difficulties which presented themselves.

A Threatened Excise Prosecution.

Mr. Russell intimated to the meeting that it had come to his knowledge that within the past few days a gentleman in the trade in Glasgow had been threatened by the Excise authorities with a prosecution for selling a pennyworth of Dr. Hamilton's pills, and he wished to know if it was competent for them to do anything in the matter.

Mr. Laing thought that as an association they should give a subscription from their funds with a view to having the case defended. He maintained that these, being B P. pills, could not legally be construed as a patent medicine. Several other gentlemen spoke strongly on this subject, but no resolution was come to.

MIDLAND PHARMACEUTICAL ASSOCIATION.

On Wednesday, January 31, a well-attended meeting of the Council of the above Association was held at the Mason College. Mr. C. Thompson (President) was unanimously appointed to represent the Association on the Executive Committee of the Federation of the Local Pharmaceutical Associations. A long discussion took place on the "company" question, and the following resolution was carried unanimously:—

> That in view of the unsatisfactory method in which companies are formed for the purpose of carrying on the business of a chemist and druggist, this Council is of opinion that steps should be taken to compel members of such companies to be qualified according to law; and, further, that any registered chemist and druggist lending his qualification for the purpose of "covering" any unqualified person or persons should be struck off the register.

On Thursday, February 8, the second smoking-concert was held at the Colonnade Hotel, and proved to be in every way a great success.

On Thursday, February 15, the annual evening meeting was held at the Mason College, Mr. R. D. Gibbs, Vice-President, in the chair. Mr. John Barclay, B.Sc., read a paper entitled

Laboratory Notes.

(1) *Standards of Purity of Saffron.*

It having recently come under my notice that a sample of pure saffron, supplied by a wholesale house to a retailer, had been condemned by a public analyst as containing "added mineral matter"; and it having subsequently transpired that this condemnation was based on the alleged presence of 7 per cent. of ash (another analysis of one of the "three" samples gave 6·6 per cent.), the question arose whether the analyst's condemnation of the sample was due to the adoption of too high a standard by the Pharmacopeia or to an erroneous interpretation of the official description of the drug.

Further, it being noted that the samples of the saffron in question were, when taken by the Food and Drug Inspector, placed in ordinary envelopes (not parchment), and that in consequence a considerable portion of the original moisture of the sample would be lost during the time when, previous to analysis, it lay in the analyst's laboratory, it appeared that the somewhat high percentage of ash found might be to some extent attributable to this.

For a sample of saffron containing 15 per cent. of moisture, and 6 per cent. of ash, would, if deprived of 5 per cent. of its moisture, contain 6·31 per cent.; of 10 per cent., 6·66 per cent.; of all its moisture, 7·05 per cent.

The table on the next page gives the results of the examination of a number of samples of saffron made during the last two or three years. In the first column is given the amount of moisture; in the second, the percentage of ash; and in the third, the percentage of ash which would be yielded by each sample if all the moisture had previously been removed.

It will be seen that the proportion of moisture and ash varies from 7·9 to 16·4, and of ash from 3·7 to 7·2. The mean percentage of ash found in all the samples, however, approximates closely to the B.P. standard of 6 per cent. Although this tends to show that the official standard is a just one, it is also obvious from the wide range of variation shown that, as was no doubt intended by the compilers of the Pharmacopœia, the expression "about 6 per cent. of ash" must be allowed to have its full significance; if this were done we should not meet with such an absurdity as the pronunciation as adulterated of a sample of saffron containing 7 per cent. of ash. In fact, I find (*C. & D.*, August 9, 1890, page 20) that Hilger has met with genuine saffron yielding 8 per cent. of ash.

TABLE SHOWING PERCENTAGES OF MOISTURE AND ASH IN SAFFRON.

Moisture, per cent.	Ash, per cent.	Ash on dry saffron, per cent.
13·8	4·6	5·33
11·0	5·5	6·18
10·2	4 5	5·01
10 4	5·7	6·36
10·6	4·9	5·48
7·9	3·9	4·01
12 9	6·3	7·80
15·8	6·4	7·60
13·8	4·3	5·56
12·9	5·5	6·31
14·4	7·2	8·41
13·5	5·6	6·47
14·1	5 2	6·05
13 0	5·4	6 20
12·7	5·5	6 22
11·4	5·4	6·09
12·[illegible]	7·0	7·95
11·6	5·6	6·33
11·9	6·6	7·49
12 2	6·3	7 17
16·3	6·4	7·64
16·4	6·2	7·41
14·3	6·4	7·46
10·9	6·1	6 84
10·2	4·7	5·23
11·2	5·0	5·64
15·0	4·4	5·17
10·2	4·9	5·45
11·3	5·4	6·08
11 3	4·9	5·52
11·6	5·8	6·56
13·7	6·1	7·06
10·6	5·2	5·88
11·2	4·8	5·40
Mean of all samples:		
12·37	5·54	6·32

Turning to the question of moisture in saffron, it seems somewhat surprising that there is no official standard for this. "Pharmacographia" gives it as about 12 per cent., and this figure is in close agreement with the mean shown in the table. It would be manifestly unwise to lay down too strict a limit with regard to moisture, but a standard of "about 12 per cent." might, I think, be safely adopted if public analysts and others could be trusted to give this expression a sufficiently rational interpretation. Such a course would also probably have the useful effect of inducing growers and importers to keep down the moisture within a reasonable limit. At present the retailer who allows his saffron to get at all dried does so to the public benefit, but himself runs the risk which the consequent increased percentage of ash entails.

It would, therefore, appear to be better if, in the official statement with regard to the drug, the percentage of ash were given on the dried saffron instead of, as now, on the drug in various states of moisture. This would, of course necessitate the raising of the present figure to the extent of, say, 1 per cent.—*i.e.*, from 6 per cent. to 7 per cent. The two points relating to the moisture and ash respectively might be embodied in some such way as the following:—

One hundred parts of saffron dried at 212° F. to a constant weight should lose not more than about 12 parts, and should yield on incineration with free access of air an amount of ash corresponding to about 7 per cent. of the dried substance.

(2) *Examination of Commercial Samples of Compound Infusion of Gentian.*

Eight samples were examined, and the results obtained are given in the table following.

A pint of compound infusion of gentian made according to the directions of the Pharmacopœia was next prepared, and gave ·855 per cent. of extractive matter. It will be seen that a concentrated preparation holding in solution eight times the amount of extractive matter found in the fresh infusion should yield 6·84 per cent. of extractive. Only two of the specimens examined approached this figure; the majority contained very much less.

The aroma and taste of the samples also varied considerably; the smell of lemon was apparent in some, in others quite absent; one sample had a distinct odour of citronella, reminding one of an inferior hair-oil, while the amount of bitterness also differed considerably in the different samples.

Number of Sample	Sp. gr.	Per cent. of Extractive dried at 100° C.	Per cent. of Proof Spirit	Appearance
B .. P	—	·855	—	—
1	1·013	7·2	21·11	Very slightly opal
2	·9835	2·3	38·87	Almost bright
3	·994	4·3	31·61	Bright
4	·987	2·7	35·47	Bright
5	·9945	3·8	31·03	Brilliant dark
6	·999	4 24	24·36	Bright dark
7	1·005	5·52	23·54	Slightly opal
8	1·010	6·47	21·11	Slightly opal

While it may be argued that the excellence of inf. gent. c.c. cannot be measured by the percentage of extractive, the possession of a good aroma and taste, or of a useful proportion of alcohol, alone, but by all these characters, it is, nevertheless, undeniable that the use of eight times the B.P. quantities of drugs in making this preparation would result in the presence of considerably more extractive matter than was found in the majority of the samples examined. The weaker preparations may be equal to the stronger ones in point of aroma and of elegance in appearance, but the pharmacist of to-day will, I think, prefer therapeutic activity to elegance of appearance.

With regard to the quantity of alcohol present, it is to be noted that we are dealing with an aqueous preparation, and it is therefore important that the amount of spirit used should be reduced to a minimum, due regard being paid to the presence of a sufficient proportion for keeping the volatile oils in solution and for preventing decomposition. It cannot be denied that infusion of gentian is best when freshly prepared, but the time and trouble involved by this being inconvenient to many pharmacists, these should insure that their concentrated preparation, when diluted down, represents as nearly as possible the B.P. infusion.

My thanks are due to Mr. F. H. Walton, who conducted the examination of the specimens of infusion of gentian.

A long discussion followed, in which Messrs. Perry, Alcock, Gibson (Wolverhampton), Southall, Campbell (Queen's Hospital), and others took part.

Infusions.

Mr. **F. H. Alcock**, F.I.C., F.C.S., read a short note on some infusions which he had asked nine of his students to prepare and bring to him to be examined. The nine samples of infusion of calumba yielded in milligrammes of extractive matter per fluid oz. as follows, respectively:—

56, 66, 68, 74, 80, 102, 111, 140, 166.

The milligrammes of extractive matter per fluid oz. in infusions of quassia were as follows in the nine samples:—

2·4, 4, 6, 8, 8, 10, 12, 12, 26.

These results suggested an animated discussion.

ULSTER PHARMACEUTICAL ASSOCIATION.

A meeting was held in Garfield Chambers, Royal Avenue, Belfast, on Thursday evening, February 15. Mr. James Leslie occupied the chair. Twelve gentlemen were elected as members, and eight as associates. Several gentlemen were nominated for election at next meeting.

Two papers were read—the first, by Mr. **Samuel L. Cleland**, entitled

Ferrous Phosphate.

By way of introduction Mr. Cleland spoke of the difficulties in preparing and preserving ferrous compounds owing to their tendency to absorb oxygen. He quoted Bouchardat and Quevenne on the medicinal value of phosphate of iron, and mentioned its occurrence in nature as the mineral vivianite and iron earth. He compared the U.S.P. method of preparation and the finished product with the British, and pointed out that the B.P. method is unsatisfactory, because by it we obtain a preparation containing at least 50 per cent. of impurities, largely contracted by oxidation in the drying process. Commercial samples which he had tested volumetrically yielded from 29.35 to 23.27 per cent. of anhydrous ferrous phosphate, showing not only that some samples did not even reach the B.P. minimum (about $33\frac{1}{3}$ per cent.), but that the variation was considerable.

He suggested that a better mode of preparation would be the precipitation of the phosphate in a saccharated solution previously boiled to expel absorbed air, the washing of the precipitate with a similar solution, and mixing it with a definite quantity of sugar, and evaporating to dryness *in vacuo*. By this means a more stable preparation, and one more suitable for administration in form of powder, is obtained. It might be termed ferri phosphas saccharata. Commenting on syr. ferri phosph., Mr. Cleland pointed out that it is impossible to prepare it of the strength of 1 grain of anhydrous ferrous phosphate in 1 fluid drachm using B.P. quantities, that being merely a theoretical calculation. He recommended the preparation of the syrup from a liquor prepared by dissolving iron wire in phosphoric acid and standardised to contain a given quantity of ferrous phosphate—say, 10 per cent.; thus we would have a liquor which could either be kept in stock in filled bottles excluded from the light, or made into a syrup which would contain exactly 1 grain of ferrous phosphate in each fluid drachm.

In the second paper Mr. G. W. Camlin gave an historical sketch of

The British Pharmacopœia

and referred to some of the preparations which could be dispensed with, in which category he put all the poultices and enemas. He suggested that all poisonous solutions should contain 1 per cent. of the active agent; that inject. morphinæ hypoderm. should be made with the tartrate, that liquor atropinæ sulph. should be made with sterilised distilled water instead of camphor-water, that tr. podophylli should be made with spt. ammon. arom., that the formula for ung. picis should be:—

	Oz.
Tar	5
Yellow wax	1
Almond oil	1

—this giving an ointment of more suitable consistency. He also suggested the officialising of Easton's syrup and pepsin wine. Both papers provoked a lively and interesting discussion.

EDINBURGH CHEMISTS', ASSISTANTS', AND APPRENTICES' ASSOCIATION.

At last week's meeting the following communications were read:—

Notes on Percolation.

By Peter Boa.

The author gave a description of the process of percolation, and explained the principle of it. His remarks were illustrated by a practical demonstration of the various methods employed. He recommended a moderate degree of fineness in the powdering of the drug, and preferred to regulate the flow of the menstruum by having the delivery-tube furnished with a tap or an adjustable clamp rather than by special attention to the packing of the drug in the percolator. He preferred this method also to the long rubber tube recommended in the U.S. Pharmacopœia, on the ground that the latter requires constant attention owing to the alteration of level in the menstruum.

Tincture of Iodine.

By C. F. Henry.

Tincture of iodine has long been a subject of controversy, and after fifty years it cannot be said we have a satisfactory preparation, though various and varied have been its formulæ. The Edinburgh Pharmacopœia tincture, which is still in considerable demand, had a strength of 1 in 16, and was made with spirit alone by the aid of heat. The London Pharmacopœia preparation termed tinct. iodinei co. contained iodine 1 in 40, and potassium iodide 1 in 20. The 1864 Pharmacopœia ordered 1 in 40 of iodine with 1 in 80 of potassium iodide, and this was retained in the 1867 edition. In 1870 Mr. Martindale pointed out that this proportion of potassium iodide was insufficient to render the tincture miscible with water, and in the 1885 edition the proportion was increased to 1 in 40, making the quantity of potassium iodide equal to the quantity of iodine. Foreign preparations are of the following strengths:—French Codex, 1 in $15\frac{1}{2}$; German and Russian, 1 in 13; United States, 1 in $14\frac{1}{3}$; Austrian, 1 in 17; Dutch, 1 in 16. These are all made without potassium iodide, and are all very much stronger than the British preparation, which is 1 in 40. The weakness of the British tincture has been most criticised and emphatically condemned; but it is urged that it is intended for internal use. However, the tincture is frequently prescribed for external use, and fails in its purpose. But the Edinburgh tincture is regularly prescribed, and suits well. The B.P. should contain a preparation of similar strength, and the author submitted the following as a formula which he had proved by experiment:—

Iodine	$1\frac{1}{4}$ oz.
Iodide of potassium	$1\frac{1}{4}$ oz.
Distilled water	$\frac{1}{2}$ fl. oz.
Glycerine	$\frac{1}{2}$ fl. oz.
Rectified spirit sufficient to make	20 fl. oz.

Add the iodine and iodide of potassium to the water; allow to stand till dissolved, then add the glycerine and sufficient rectified spirit to make 20 fl. oz.

Such a tincture (1 in 16) would be suitable for both internal and external use, and is, like the present tincture, miscible with water in all proportions. The dose would be 2 to 8 minims, and 24 minims to the fluid ounce would make a vapor iodi corresponding to the present official vapor iodi.

Liquefied Carbolic Acid.

By C. F. Henry.

The author gave the results of a number of experiments which confirmed the suggestion made by Mr. Boa in a recent paper. He found that the best results were obtained by using 90 fluid parts carbolic acid, $7\frac{1}{2}$ fluid parts water, and $2\frac{1}{2}$ fluid parts rectified spirit. In the subsequent discussion it was suggested that the stability of the liquid at low temperatures might be attained by adding 15 per cent. rather than 10 per cent. of water.

MANCHESTER PHARMACEUTICAL SOCIETY.

The business at the February monthly meeting was postponed for a month, in consequence of the stormy weather and the poor attendance of members.

Gazette.

THE BANKRUPTCY ACTS, 1883 and 1890.

Receiving Order.

Mitehell, Stephen, lately carrying on business as George Mitchell, Leeds, late York, out of business, late oculist and aurist.

Adjudication.

Petty, Franeis, Reading, dentist.

Order Made on Application for Discharge.

Sherley, James, Twickenham Common, S.W., horse-dealer and veterinary surgeon—discharge granted conditionally.

Scotch Sequestration.

Snodgrass, James, Marshall's Lane, Paisley, carrying on business there under the firm of James Snodgrass & Co., of which he is sole partner, as a firm, and as an individual, manufacturing chemist. Meeting to elect trustee and commissioners in the Globe Hotel, High Street, Paisley, February 26, at 12 o'clock.

TRADE-MARKS APPLIED FOR.

ANY person who has good grounds of objection to the registration of any of the following marks should *at once* communicate with Sir Reader Lack, Comptroller-General, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

(*From the "Trade Marks Journal," February* 7, 1894.)

"AMMONIA DRY SOAP," and device of the god Jupiter Ammon, on label; for ammonia dry soap. By R. Armstrong, Saul Street Works, Preston. The essential particular is the device of Jupiter Ammon. 176,666.

"VIAVI" and "SANO," and signature of applicants; for chemical substances used in medicine and pharmacy. By the Viavi Company, Van Ness Avenue, San Francisco. The essential particular is the signature. 175,492, 175,493.

(*From the "Trade Marks Journal," February* 14, 1894)

"X. L. ALL," and device of vine-leaf and monogram, and wording; for vaporising fumigator and liquid insecticide. By G. H. Richards, Old Shot Tower, Lambeth, London. The essential particular is the device of vine-leaf. 175,113.

Device of cherub riding cod-fish; for emulsion of malt-extract and cod-liver oil. By Patterson's Chemical-manufacturing Company (Limited), Phœnix Works, Lochburn, Glasgow. 177,233.

"ITROSYL" for chemical substances used in medicine and pharmacy. By Fletcher, Fletcher & Stevenson, North London Chemical-works, Holloway, N. 177,631.

Device of steam-hammer; for medicines for human use. By J. H. Thomson, 21 Townsend Lane, Cabbage Hall, Liverpool. 177,693.

"ACOSERINE"; for an automatic vaporiser of volatile substances. By J. G. Richards, 58A High Street, Hastings. 177,074.

Device of an open fan; for perfumery and toilet articles. By J. Crosfield & Sons, Bank Quay, Warrington, 176,823.

"BATUSHKA"; for perfumery. By R. B. Breidenbach, 48 Greek Street, Soho Square, London. 177,378.

(*From the "Trade Marks Journal," February* 21, 1894.)

Device of a rhinoceros, address, and Latin motto; for chemical substances and drugs used in medicine and pharmacy. By the Master, Wardens, and Society, &c., of Apothecaries, Water Lane, Blackfriars, London. The essential particular is the device. 174,804.

"AMALTHEA," signature, and wording on label; for a medicine for human use. By Dr. B. De Toledo Pintor, Lopez, 3, Valencia, Spain. The essential particulars are the word "Amalthea" and the signature. 176,774.

"DR. PAUL FOUQUIER'S ELIXIR OF LIFE, P.F.D.," and device of hour-glass; for a medicine for human use. By P. Fouquier, 23 York Terrace, Regent's Park, London. The essential particular is the device. 177,511.

"ACOSERINE"; for a chemical compound for use in medicine and pharmacy, and for toilet-articles, &c. By J. G. Richards, 58A High Street, Hastings. 177,836, 177,837.

"ORONA," and sketch of lady in evening dress, and wording on label; for a toilet-cream. By E. Clarke, 145 Stanstead Road, Forest Hill, S.E. The essential particulars are the word "Orona" and the device. 177,165.

"ZEPHOLINE"; for emollient for the skin, hair-wash, and tooth-powder. By T. H. Deane, 2 Sloane Street, London, S.W. 177,326.

TABLETS AND MATCHES.—A lad named Phillips, living at Clapham, has been the victim of a peculiar accident. In his pocket he had some chlorate-of-potash tablets and safety matches. The friction of the two caused a slight explosion, and the lad's clothing caught fire. He was rather severely burned, but is now out of danger.

Patents.

The following applications for Patents have been registered at the Patent Office.

Alkali and Acid.—18,355.—September 30, 1893.—W. G. Johnston.

Artificial Musk.—17,703 and 17,781.—September 20, 1893.—A. Baur.

Camphor Inhaler.—16,892.—September 8, 1893.—B. Woodward.

Chlorine.—16,652.—September 5, 1893.—A. Vogt and A R. Scott.

Clover's Inhaler.—17,316.—September 14, 1893.—E. C. Ryall.

Effervescing-beverage Apparatus.—16,301.—August 29, 1893.—W. Bitter.

Howard's Universal Herb-medicine.—17,665.—September 20, 1893.—J. Howard.

Infant's Feeding-teat.—17,611.—September 19, 1893.—M. Goodwin.

Liniment.—17,976.—September 25, 1893.—C. G. Hawkes.

Nitric Acid, &c.—18,192.—September 28, 1893.—H Morris.

Potassium Salicylate and Salicylic Acid.—17,002.—September 9, 1893.—S. Marasse.

Skin Specific.—18,177.—September 28, 1893.—G. T. Hall.

Stoppered Jars or Bottles.—16,728.—September 6, 1893.—W. Breffit.

Syphons and Seltzogenes.—16,186.—August 28, 1893.—W. H. Symons.

Tasteless Drugs.—16,590.—September 4, 1893.—E. Freund. Administering acids and drugs without tasting or smelling the same.

Tooth and Face Powder.—16,649.—September 5, 1893.—L. Winterhoff.

"Victoria" Extract of Soda.—18,169.—September 27, 1893.—S. E. Mott, G. W. Wort, S. Wort, and E. W. Wort.

SPECIFICATIONS PUBLISHED.

Copies of the following may be obtained from the Patent Office, by post, on application by card obtainable at any post office for 8*d.*

1892.

13,047. Wallis. Chlorine.
16,184. Bronner. Oxide of lead, &c.
16,757. Rice. Sulphuric acid.
17,398. Hill & Rix. Feeding-bottles.
18,417. Meadowcroft. Soda-water machines.
18,598. Candy. Iron sulphate, &c.
19,700. King. Feed-cakes for cattle.
19,812. Mond. Obtaining ammonia, chlorine, &c.
19,946. Jensen. Inhalation-bottle.
21,461. Mincher. Babies' soothers, pads, &c.

1893.

12,074. Vogt & Scott. Obtaining chlorine.
12,426. Campbell & Boyd. Obtaining manganese peroxide.

FOR COLD IN THE HEAD take a ripe lemon and squeeze some of the juice into the palm of the hand. Then inhale it up the nostrils. Two or three such inhalations will suffice, it is said, to cure an ordinary cold.

Trade Notes.

GARDNER'S patent "Rapid" sifters and mixers were awarded a diploma at the Bristol Exhibition which has just closed.

THE superfatted-soap question seems to be a burning one among makers. Messrs. D. & W. Gibbs express themselves warmly in an advertisement this week in defence of their superfatted cold-cream soap.

MESSRS. ZIMMER & CO., of Frankfort, send us their annual report and price-current containing quotations of many hundreds of pharmaceutical products prepared by that well-known firm. Sundries and photographic specialities also find a place on the list, in which we also notice quotations of Pastor Kneipp's Medicine-chests.

"POTTER'S POPULAR GARDENING," a book of over 100 closely-printed pages for 1*d*., is a veritable marvel. It deals practically and soundly with all the principal gardening operations, with definite instructions for the culture of all the flowers, fruits, and vegetables common to ordinary gardens. The publishers, Messrs. Potter & Clarke, Raven Row, London, E., will send a copy by post to anybody for 1½*d*.

THE directors of the Sanitas Company recommend that the profits of the business for 1893 shall be appropriated as follows:—To reserve, 1,534*l*. 12*s*. 7*d* (bringing up the total of that fund to 10.000*l*.); to depreciation of patents and goodwill account, 750*l* ; to final dividend of 1*s*. per share (making, with interim dividend already paid, 10 per cent. for the year) and bonus of 1*s*. per share, making a total distribution for the year of 15 per cent. Balance to be carried forward 353*l*. 19*s*. 3*d*.

THE half-yearly report of Brunner, Mond & Co. (Limited) has just been issued to the shareholders. The balance-sheet shows a profit of 150,550*l* odd for the working of the half-year ended December, 1893, which, with the 89,400*l*. brought forward from the previous half-year, makes a total of 239,951*l*. This the directors propose to deal with as follows:—A dividend of 7 per cent. on the preference capital, 15,290*l*.; dividend of 30 per cent. on the ordinary capital, 119,731*l*.; amount to be written off patent account, 2,500*l*.; amount to be placed to suspense account, 20,000*l*.; and balance to be carried forward, 82,429*l*.

AN illustrated notice descriptive of the works of the Actien Gesellschaft für Chemische Industrie, in Rheinau, appears, in the "Früblings-Blätter," of Baden-Baden, a nicely got-up guide to that famous watering-place and the neighbouring cities. The Actien-Gesellschaft in question is a notable example of the rapid growth of German chemical industry. It was founded only seven years ago in a small way, and now employs an office staff of 300 persons all told, while its annual production of pharmaceutical and other chemicals reaches the value of 250,000*l*.

Business Changes.

MR. BOWEN has purchased the business of Mr. Harold Mitchell, the Merton Pharmacy, South Wimbledon.

GOSS & CO. (LIMITED) are opening a chemist's stores at 460 Oxford Street, W., two doors from Gould & Co., chemists.

A CHEMIST'S business has been opened by Mr. Crick (from Muston's, Western Road, Brighton) in George Street, West Brighton.

WE are asked to state that Mr. W. F. Carling's relations with Messrs. Blondeau et Cie. have been severed, and he is not now representing them.

MR. KIRCUP'S chemist's business in the Greenwich Road, Charlton, S.E., is closed, and the fittings have been removed from the shop.

MR. CHAS. GRAY, for many years with Mr. Edwards, chemist, Lewes Road, Brighton, has opened a chemist's business in Shirley Street, West Brighton.

MR. W. ASHTON, chemist, Montague Street, Worthing, has taken over the business of Mr. J. P. Leach, Shoreham, which he will carry on in addition to his Worthing business.

MESSRS. WILLIAM FORBES & CO., wholesale druggists and manufacturing chemists, of Nottingham have removed from Park Street, to Chamber Buildings, Parliament Street, in that town.

MR. DUTEREAU CROFT, chemist and druggist, late of Doncaster, has acquired Mr. Wade Pickering's business at Crowle, Isle of Axholme. Mr. Pickering has retired from the drug-trade.

OWING to the decease of Mr. Weedon, of Weedon & Leach, chemists, Crawley, the business will be carried on by Mr. Leach, the remaining partner, and his son, Mr. J. P. Leach, who has given up his business at Shoreham.

MARRIAGES.

MIDDLETON—SUTTON.—On February 6, at St. Mary Shandon Church, Cork, by the Rev. Canon Powell, D.D., John Porteous Middleton, son of the late Captain Chas. G. Middleton, of Liverpool, and manager for Mr. James Stewart, chemist, Limerick, to Elizabeth Jane (Lizzie), second daughter of Thomas Sutton, Esq., 10 North Mall, Cork.

THOMPSON—BRIANT.—On January 29, at St. Michael's Church, Bournemouth, Mr. A. Lewis Thompson, chemist and druggist, Snargate Street, Dover, to Miss Briant, youngest daughter of Mr. J. Briant, of Bournemouth.

DEATHS.

CANBY.—The death has occurred of Mr. J. F. Canby, who for thirty years conducted a drug business in Duke Street, Bolton. He was 55 years of age, and leaves a widow and four children.

RHODES.—At Croydon, the widow of the late Mr. T. B. Rhodes, chemist and druggist, of Cherry Orchard Road.

SCHIEFFELIN.—Mr. Sidney A. Schieffelin, formerly one of the partners of Schieffelin Brothers & Co., New York City, died at Geneva, N.Y., recently. He was in his 70th year.

Bankruptcy Report.

Re SAMUEL CLOTWORTHY & CO. (Samuel Clotworthy), 14 and 16 Gordon Street, and 2 Murray Terrace, Belfast, Druggist and General Merchant.

THIS failure, reported as an arrangement last week, has gone into the Bankruptcy Court, and the following statement of affairs has been issued:—

Liabilities.

		£	s.	d.
Unsecured liabilities		2,936	2	3
Liability on bills discounted..		551	8	9
Preference claims	£110 19 2			
		£3,517	11	0

Assets.

		£	s.	d.
Debts	£789 7 3			
Estimated to produce		400	0	0
Stock-in-trade	£552 4 1			
Less depreciation (say)		500	0	0
Fittings and fixtures		15	0	0
Horse and harness	£16 0 0			
Float, two vans, and spring-cart ..	19 0 0			
		35	0	
Household furniture	£20 0 0	40	0	0
		990	0	0
Less preference claims, as per contra		110	0	0
		£880	0	0

At a meeting of creditors held herein, after considerable discussion, it was ultimately resolved that a composition of 6*s*. in the pound, payable in four equal instalments, at three, six, nine, and twelve months, last payment secured, be accepted, and that the offer be recommended to the other creditors.

THE "TIT-BITS" SHOP-WINDOWS.

ON the page facing this we reproduce the photographs of chemists' shop-windows received by the editor of *Tit-Bits* in competition for the 100*l.* prize offered by that gentleman for the best-dressed shop-window. The total number of photographs received was about 600, only eight of which were sent in by chemists. Not one of the pharmaceutical competitors received even as much as a prize medal, their ill-success being no doubt due, in some measure, to the absence of any colour-effect in the pictures, and to the decorative disadvantage at which a pharmacist is placed when compared with, say, a dealer in ornamental china or bronzes.

The window at the left top of the page is that of Cook's Pure Drug Stores, 154 High Street, Stourbridge, which made "Christmas presents" in the way of bonbons, perfumes, &c., their chief attraction, all goods being marked with their prices. At the corresponding corner to the right is the window of Mr. T. Gilbert, chemist and druggist, of Sandbach, who chose a much more simple and purely pharmaceutical selection of goods for his display. Between them figures Mr. Wm. Slack's executor, 53 St. Sepulchre Gate, Doncaster. Below are Messrs. G. J. B. Woolley, of the Pharmacy, Leicester, and Arthur Oglesby, 21 Cheapside, Barnsley. Mr. Woolley informs us that his object in taking part in the competition was solely to encourage his manager and assistants to show that pharmacists could hold their own in the matter of tasteful window-dressing. We consider that he has been fairly successful in this object, for this window is undoubtedly one of the best of the eight. The window contained very little of the ordinary pharmaceutical displays, but a grand show of cut glass, white and coloured perfume-sprays, scent-bottles, perfumes of all kinds and all makes, ebony, shell, pearl, and other brushes, &c. The appearance at night was much improved by the introduction of the new patent incandescent gas burners which produce an effect equal to electric light, the interior lights being shaded with pink globes. The window is fitted with movable sliding plate-glass shelving, and the back is mirrored throughout, reproducing the whole of the stock shown, and thereby greatly adding to the effect of the various colours.

Mr. Oglesby introduced quite a novel feature. He invited all the little girls in Barnsley to dress up dolls for competition, and to take them round to his shop to be shown in the window just before Christmas. Lady-judges were appointed and awarded a large number of prizes for the best-dressed dolls. There was such a crowd before Mr. Oglesby's window while the doll-show was on that the Barnsley Magistrates threatened to summon the owner of the shop for creating a nuisance, but let him off with a caution on his promising not to offend again. "I would remark," says Mr. Oglesby, "that I firmly believe every chemist throughout the country—were he wide awake enough—could make his window-display so attractive and effective each month (a chemist's window should be dressed at least once a month) that the profits resulting from direct sales from the window alone would cover rent and rates. Should the question be put, With what can I dress it, and how? my answer is, Read your CHEMIST AND DRUGGIST as the next most important book to your B.P., and you will gather, time after time, sufficient ideas how to dress it from its advertisements. Don't forget to price your window-goods, however dear."

Messrs. Biddiscombe & Rowland, of Willesden Green, N.W., had also a highly effective window. Unfortunately the reflection of the house opposite their shop spoils the effect of the photograph. The goods shown in this window were mostly dummies, wrapped in coloured paper and finished off in the best manner.

"I am of opinion," says Mr. Charles Biddiscombe, who dressed the window, "that chemists' windows can be made to look well by a judicious arrangement of dummies of various kinds and colours without going to much expense, and especially, as in our case, when the sun is likely to spoil goods."

Messrs. Bishop & Co., of 460 Holloway Road, N., and Mr. J. Adams, of 322 Kentish Town Road, N.W., who are the two other competitors, made quite effective displays, though, we should say that the windows are perhaps too full in both cases. In Mr. Adams' window showcards were prominently displayed, and perfumes and toilet bottles formed a very considerable section of the goods shown. Messrs. "Bishop & Co.," who figure as "reducers of chemists' prices," show six serried rows of perfumes.

WILLS OF DECEASED CHEMISTS.

The will of Mr. Charles Bromley, of Laurel Bank, Oxton, in Cheshire, who died on November 16, 1893, has been proved at the District Probate Registry by Mrs. Mary Prew Bromley, the widow and executrix of deceased. The value of the personal estate and effects amounted to 1,049*l.* 13*s.*

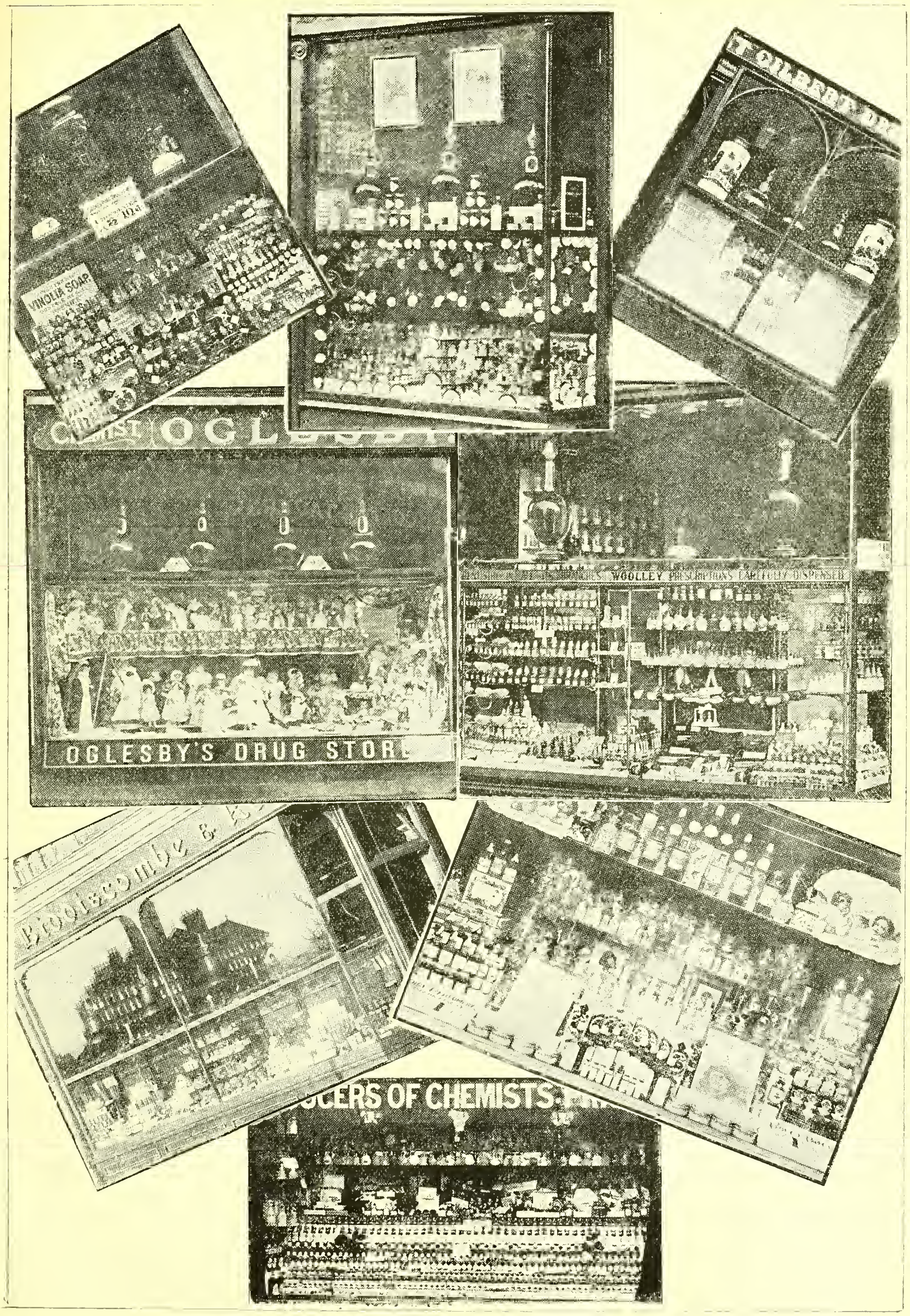
The personal estate of the late Mr. John Barlow, pharmaceutical chemist, of Newport, Salop, where he had filled many public offices, has been sworn under 3,000*l.* By his will, dated May 5, 1892, the testator appointed his wife, Mrs. Marianne Barlow, and his friend, Richard Williams, of Newport, his executrix and executor, and bequeaths and devises the whole of his property to the former.

The will of Mr. George Stanbury Pedler, gentleman, of Wood Bank, Lordship Lane, Dulwich, and formerly chemist and druggist, Fleet Street, E.C., who died on December 2, has been proved at the Principal Registry by Mr. J. R. Pedler, of 47 Tregunter Road, South Kensington, and Mr. G. H. Pedler, M.R.C.S., of 6 Trevor Terrace, Knightsbridge, sons and executors of the deceased. The gross value of the personalty amounted to 7,626*l.* 8*s.* 6*d.*, and the net value to 7,427*l.* 6*s.* 4*d.* and no more, upon which latter amount probate-duty is levied.

The will, dated September 15, 1893, of the late Mr. Robert Higgins Davies, of The Laurels, Balham, general superintendent of the Society of Apothecaries, who died at Bournemouth on November 16 1893, has been proved at the Principal Probate Registry by Mrs. Alice Georgina Davies of Horsell, Surrey, the widow and sole executrix of the deceased. The gross value of the personalty amounted to 415*l.* 7*s.* 6*d.*, the net value to 139*l.* 5*s.* 6*d.* The testator bequeaths and devises the whole of his property, real and personal, to his widow and her heirs and assigns, to have and to hold absolutely according to the nature of the respective tenures.

The will, dated February 22, 1893, of Mr. Peter Holland Jackson, of Riversdale, Ashley Heath, Cheshire, who died on December 8, 1893, has been proved by Mrs. F. E. Jackson, the widow, and Mr. Thomas Fairhurst, of Altrincham, bank-manager, to the latter of whom is bequeathed 50*l.* The testator leaves his plate, linen, wines, pictures, books, furniture, and household effects, with an immediate legacy of 200*l.*, to his widow absolutely. The residue of his personal property, with his messuages and real estate, the testator leaves to his executors, in trust, for the use and benefit of his wife during widowhood. Afterwards the estate is to be equally divided between his children if any survive to attain 21 years, failing which, between testator's nephews and nieces. The gross value of the personalty amounted to 13,165*l.* 13*s.* 3*d.*, and the net value to 13,098*l.* 1*s.* 3*d.*

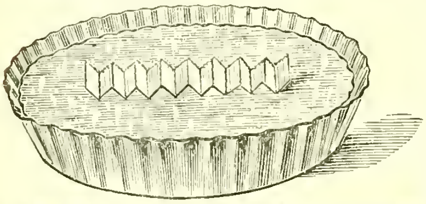
The gross value has been sworn at 116,310*l.* and the net value at 104,296*l.*, of the personal estate of Mr. George Aldcroft Phillips, late of Oxford Lodge, Southport, and of Whit Lane, Pendleton, of the firm of David Thom & Co., soap-boiler and chemical-manufacturer, who died on November 2 last. The testator's son George Walter is to have the option of purchase of the business of a soap-boiler and chemical-manufacturer carried on by the testator under the style and title of David Thom & Co., with the goodwill, the benefit of the contracts, the plant and machinery, but not including the stock-in-trade and book-debts, for 30,000*l.*, the payment of which may be deferred for 14 years; and if he elects to purchase, a sum of 20,000*l.* may be left in the business for the same period, both sums to carry interest at the rate of 5 per cent. If the business should not be sold to the testator's son the executors may transfer it to a limited company. Mr. Phillips leaves all his real estate and the residue of his personal estate in trust in equal shares for all his children. His wife gets 500*l.*, his leasehold house at Southport and its furniture, and a life annuity of 2,500*l.*


VINOLIA SOAP
CHEMIST OGL
OGLESBY'S DRUG STORE
WOOLLEY PRESCRIPTIONS CAREFULLY DISPENSED
OCERS OF CHEMISTS

KINGZETT'S PATENT

SULPHUR FUMIGATING CANDLES

ARE FAR AHEAD OF ALL OTHERS.



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6*d*. Candles,
3/10 per doz. net.
1*s*. Candles (water jacketed),
6/10 per doz. net.

They are lighted with the greatest ease, and burn steadily and thoroughly, ensuring more secure Disinfection than any others.

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MODERATE INCLUSIVE FEES.

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PREPARATIONS:

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Malt and Oil.
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Special connexion amongst Doctors in Paris & Provinces.

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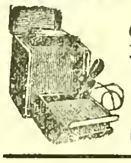

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GENT & CO., LEICESTER.

The Practitioner.

"WE have subjected Fletcher's Concentrated Liquors to a prolonged test, and we are able to report that, when diluted according to the directions given, THE RESULTING TINCTURES, &c., ARE INDISTINGUISHABLE IN STRENGTH, APPEARANCE, AND EFFICACY FROM THE OFFICIAL PREPARATIONS."

Editorial Comments.

THE POISON TRADE.

There is abundant evidence that the flowing tide is with us as regards the sale of poisons. The publicity recently given to an action taken by the Pharmaceutical Society against a Liverpool dealer in photographic articles for selling poisons, among other chemicals, has been apparently satisfactory to the public; the sale of an arsenical sheep-dipping compound by an unqualified vendor at Chester has been the subject of a police prosecution; there has been no public indignation, but, on the contrary, very marked approval in many quarters, at the action taken in regard to the sale of proprietary medicines containing poisons; and no disinterested person, not even a journalist, has been found to argue against the absolutely reasonable demand that carbolic acid shall be scheduled as a poison.

If the fathers of our trade had been wiser, the present transition stage would have been got through a quarter of a century ago. They did not realise its importance to themselves, and some of them, especially the Pharmaceutical Council section, entertained a little malice against the poison-sections of the Pharmacy Act because these had been forced upon them and were not their discovery. The public and the Legislature, on the other hand, having provided, as they thought, sufficient safeguards against accidental poisoning, complacently forgot all about the matter, and so it was allowed to slumber.

Everybody has woke up lately. So much the better, and it is not our intention to comment on the past. We are heartily glad to see the Pharmaceutical Council in earnest about the suppression of the illegitimate trade in poisons. They have made this their chief duty during the past year or so, and research laboratories, *conversazioni*, and schemes of education have very properly retired into the background for a while.

So far, good; but it is necessary to say that the work has only been begun as yet. It has to be made clear to everybody that it is the will of Parliament, the will of the nation, and our own intention that the retail trade in poisons is to be rigidly confined to registered chemists and druggists. Amateur photographers have to learn this; so have farmers, makers and purchasers of patent medicines, housekeepers, grocers and oilmen, and people contemplating murder or suicide. Some of them find the lesson a hard one, but they will learn it all the more thoroughly through their struggles. The patent-medicine men have evidently discovered that the situation is serious. They are fighting the battle inch by inch, or we should rather say grain by grain. They, and the Pharmaceutical Society too, are determined to ascertain through the law-courts just what are the limits of a preparation of poison, and it is not at all unlikely that the case at Derby, whichever way it may be decided there, will be the key-case of this contest.

The Privy Council and the Home Secretary may need wrestling with on the carbolic-acid question. They are unaccountably deliberate over that addition to the poisons schedule, but if they should set themselves against it, we hope the Pharmaceutical Council will prepare for action promptly. They would have all the arguments and the sympathy of all people of influence on their side, and they would be sure to win with credit if they would only show the necessary vigour.

But they can, and should, do much more than thus fight formally. At present they only move, we believe, when information reaches them. Perhaps the information received may suffice for the moment to keep them busy, but the instant slackness arrives they should seek out cases. Moreover, they should do as other public bodies do in these days. The Board of Inland Revenue, the London County Council, and other bodies entrusted with the administration of statutes notify persons concerned of the law and of their determination to enforce it. A circular from the Pharmaceutical Society to dealers in photographic chemicals, agricultural chemicals, and poisonous substances generally would be at the same time a fair warning and a legitimate means of making the Act known. If the sale of poisons by unregistered persons were kept down as is the sale of spirits by unlicensed persons, it would be good both for the public and for the trade.

If a consummation of this kind is to be attained, chemists must show themselves willing and competent to fulfil all reasonable conditions. They must assist in every way to minimise the risks of the trade, but they must at the same time provide all that is necessary in respect of price, convenience, and supply of legitimate requirements.

GLAND EXTRACTS.

In the *fin de siècle* Pharmacopœia vegetarianism reigns supreme, but in the good old days it was quite otherwise. The ancients drew their materia medica with a happy impartiality from both animal and vegetable kingdoms, and, indeed, not so very long ago every apothecary's shop could furnish a collection of animal curiosities sufficient to put the witches' cauldron in *Macbeth* to shame. Then came science, and the "eye of newt and toe of frog" style of prescription passed away. The physician became possessed with a desire to know something about the action of the remedies he used, and naturally inorganic and plant products were the first to give him satisfaction, while the more complex and less easily obtained and preserved products of animal life were dismissed to the background for a time. For a time only, however, and now we are fairly started on our way back to the flesh-pots. Animal alkaloids, albumoses, and gland extracts are already on the cards, and neither a prophet nor the son of a prophet is required to predict that these and similar substances will bulk largely in the B.P. at no very distant date.

Animal materia medica, as a whole, is a big subject, and here it will suffice to touch upon one of its departments —extracts of animal glands. This department is, perhaps, less important and less promising than the others; but results have been obtained in it, which a year or two ago would have seemed impossible, and at least one disease, formerly incurable, has now been unquestionably cured. We refer, of course, to myxœdema, treated by thyroid extract, and we might also mention its still more wonderful effects on cases of cretinism. The results in these have been conclusive—so conclusive that even the voice of the scorner is silenced, and the inevitable stage of ridicule being passed, the new method has entered upon the other inevitable and opposite stage. The medical mind seems to be suffering from an animal-extract mania, and preparations of almost every organ in the body are being tried upon all sorts and conditions of disease. This mania for novelties is, however, nothing more than a little weakness to which "the profession" has always been more or less liable, although, fortunately for the preservation of the genus *homo* the symptoms are not lasting. In the present instance we may expect a recovery *tutus, celer, et jucunde*, and then animal extracts will get a chance to settle down to their proper place in the therapeutic list.

To attempt to say what that place is, may, at present, be a little premature, but the experience so far gained seems to justify at least one or two deductions. The general principles of the method are these: A gland produces certain chemical substances—its secretion. If this secretion is essential to the economy, and if for some reason the gland fails to supply it, disease results. Disease produced in this way can be cured by supplying the secretion artificially. This appears to indicate pretty clearly the directions in which the prospectors of gland extracts are likely to "strike oil," for of the numerous glands of the body not every one but some only can be of use.

From the extract point of view we may divide the glands of the body into two great groups—glands provided with ducts and ductless glands. The sweat glands, the salivary glands, the glands of the stomach and intestine and the kidneys are instances of the variety with ducts, while the spleen, the lymphatic glands, the red bone-marrow, the pituitary body, the thymus gland, and the suprarenal capsules belong to the ductless group. This possession or non-possession of a duct means an essential difference, for the secretion of all the ductless glands remains part and parcel of the body, but the secretion of a gland with a duct does not. The ducts all lead to the surface of the body either directly or indirectly through some of the internal passages. In any case the result is the same—whatever the gland secretes is drained away through the duct, and as it ceases to be an integral part of the body it also ceases to have any direct action on the tissues of the body.

It follows, therefore, that these glands with ducts cannot very well occasion disease in the way we have indicated, and no benefit can be expected from the administration of extracts made from them. With the ductless group of glands it is otherwise. They have no communication with the exterior of the body, and all the chemical substances they produce must enter the circulation and exercise directly on the tissues whatever action they possess. Just here arises the question, "What may that action be?" In the case of a gland with a duct there is, of course, no trouble. The secretion can be collected, and bottled, and labelled. Its chemical constituents and its physiological action can be put down in black and white and a Q.E.D. writ large thereon.

The functions of the ductless glands, on the other hand, are still a matter of dispute, and there is no other group of organs in the body about which physiologists know so little. Some of them, indeed, are even yet looked upon as mere curiosities, but this much we can take for granted: none of these glands are there without some useful function. The very significant fact that in certain diseases they undergo profound alterations in size and structure has been known for a long time, but the exact bearing of these alterations upon the diseases was a matter merely for conjecture. Now, however, the experience gained from myxœdema has thrown a flood of light on the whole question. The gradual wasting of the thyroid gland, and the simultaneous overloading of the whole body with a growth of mucoid tissue, suggested the inference that the normal thyroid secretes something that prevents the growth of the parasitic tissue. But the inference becomes as nearly a certainty as anything medical can be when by giving thyroid extract we see the rapid disappearance of the mucoid substance and the return of the system to health. In addition to myxœdema and cretinism quite a number of diseases are already known to be associated with changes in one or other of the ductless glands, and now that attention has been prominently drawn to the matter we may expect to have many additions to the list. It will be in diseases of this class that the gland or its extract can be given with some reasonable prospect of success.

For pharmacy, as well as for medicine, this opens a new field—of no great size, it is true, at present, but promising for the future. From the trade standpoint gland extracts have one cheerful quality—unlike the majority of things medicinal they belong to that admirable class of articles which once used are always used. There is no such thing as a permanent cure of myxœdema or any allied disease. The glands normally producing the secretion being destroyed, the cure can be kept up only so long as the treatment is kept up, and through life a regular supply of gland extract becomes as necessary as a regular supply of food and drink.

Animal extracts do not come to the pharmacist as an unmixed blessing. They bring with them difficulties—numerous, peculiar, and not provided for in the subjects of the Major and Minor examinations. These will no doubt be overcome in due time, and when they are we shall have pharmaceutical preparations containing the active element of the gland, and that only, elegant in form, innocent of germs or toxines, and capable of being prescribed and dispensed *secundum artem*, with adjuvants and correctives if need be, and with that fine precision and gradation of dose which are almost, if not quite, the most important factors of successful treatment. A great deal remains to be done before this state of perfection can be reached, but the enterprising pharmacist is already well in the running, and soon we may expect to see his shelves decorated with pilula pituitariæ, syrupus thyroideæ, succus suprarenalis, and many other startling and novel remedies, which will doubtless prove a blessing both to "him that gives and him that takes."

ELECTRIC ALKALI.

A CHEMICAL venture which "should prove eventually almost as remunerative as a somewhat similar undertaking—Brunner, Mond & Co. (Limited)"—is a tempting proposal in these days of small dividends or none. The promise is made on behalf of the Electro-chemical Company (Limited), which has been formed, with a capital of 200,000*l.*, for the purpose of acquiring Messrs. Holland and Richardson's patents for the electrolytic production of caustic soda and chlorine. The advance prospectus which has been issued to the trade is somewhat meagre in the details necessary for a proper estimate of the value of the Holland-Richardson patents; for although the process has been in operation experimentally since 1891 at the Snodland Paper-mills, Kent, the actual work done by the plant during that period is not stated. The prospectus is accompanied by reports on the process from Dr. John Hopkinson, F.R.S., Mr. James Swinburne, an electrical engineer, and Mr. J. Leith, an alkali-manufacturer who was for some time in the vendor company's employ superintending the process, with analytical reports on the caustic soda and bleach produced. In none of these do we find the technical particulars which an alkali-manufacturer would especially desire. Dr. Hopkinson reports that "about 500 ampères were passing through thirteen tanks" when he observed the process, and he calculates from well-established electro-chemical data that that amount of electric force "will decompose 363 lbs. of common salt per week of 150 hours." This amount agrees with what Dr. Hopkinson was told was the practical experience. We may, therefore, ask why the promoters, having that practical experience, do not give (1) the cost of the plant in its present condition; (2) the actual cost of working it; (3) the amount of salt used and the proportion of it decomposed; and (4) the amounts of caustic soda and bleaching-powder produced. Even Mr. Leith, who supervised the plant for 28 weeks, "each of 156 hours," only tells us that during that period he "turned out about 5 tons and 8 cwt. of caustic soda and bleach from each charge." Good; but what was the charge; how many were there in the 28 weeks; and did the yields of alkali and chlorine agree with theory? It should be remembered that hitherto the electrolytic difficulties have been the bugbear in this department of electro-chemistry, and Messrs. Holland and Richardson appear to have solved at least two of these. First, by getting rid of a diaphragm between cathode and anode they have reduced resistance, thus effecting a saving in power; and by making the cathode of copper coated with oxide of the metal they provide a means of fixing the nascent hydrogen, which has also been of considerable trouble to experimenters. The latter improvement is particularly ingenious, but it seems to us that if the process is worked on a large scale the copper-oxide requirement will be enormous, because the fixation of the hydrogen is due to the reduction of the copper-oxide to the metallic state. Roughly speaking, for every 5½ tons of common salt decomposed, 4 tons of copper oxide will be needed. The copper is not lost, but it has to be converted into oxide again, and that means time, plant, and expense. But independent of all these electric considerations, there remains the chief practical difficulty which has been observed in all the electro-alkali processes—viz., that a caustic solution stronger than about 10 per cent. has not been produced; and as the salt solution used is nearly saturated, it is obvious that the caustic solution contains much decomposed salt. To get rid of that by crystallisation, evaporation is necessary and to get a ton of caustic soda it is necessary to evaporate about 9 tons of water. This has been the serious objection to such processes, and the reason why they have not yet been able to compete with the Leblanc and Solvay processes, Whether in the Holland-Richardson process this difficulty has been overcome we are not in a position to say, because the prospectus is not definite enough.

SCHEDULING CARBOLIC ACID.

"The Home Office will, in all probability, decline to include carbolic acid among the scheduled poisons. . . . The preparation has come into such universal use that public opinion would probably support Mr. Asquith in refusing to place restrictions on its sale." So says the *Manchester Courier*. The paragraph reads as if it had been inspired by somebody interested, but that the "probables" had been inserted by the conscientious journalist, who was not quite sure that the salt had been duly placed on Mr. Asquith's tail.

THE LABELLING OF PROPRIETARY MEDICINES IN BELGIUM.

The action brought against M. Coppermans, a pharmacist of Antwerp, for selling a bottle of Sequah's Prairie Flower on the label of which the ingredients were not named, came before the Cour de Cassation at Brussels on final appeal this week. The royal ordinance of March 1, 1888, required that such announcement should appear on the label, but the argument for the defence was to the effect that the ordinance went beyond the law (which permits secret medicines), and was therefore invalid. The Court of Appeal held that the information required by the ordinance did not destroy the proprietor's secret, and was therefore justifiable, and a penalty of 100f. was imposed. The Cour de Cassation maintains that judgment. and decides that the Executive has the right to take all measures necessary for the protection of the public health, and cannot concern itself with the inconveniences which may result to manufacturers and vendors. This judgment is, of course, of serious import to all English proprietors of medicines who have acquired any demand for their preparations in Belgium.

TRUSTWORTHY INFUSIONS.

No winter session would be complete without a discussion on infusions, with due commination of the use of the concentrated ones. This is supplied this week by the Chemists' Assistants' Association, of London. Mr. White shows how fresh infusions can be preserved for a month or more by adopting the methods of sterilisation familiar in every bacteriological laboratory; and his ethical audience rejoices at the simultaneous deliverance afforded them from the trouble of continually making new infusions, and from the pharmaceutical crime of employing one of the concentrated preparations. At a Birmingham meeting Mr. Alcock provides an amusing commentary on this prejudice. He got his students to prepare eighteen cold infusions, nine of calumba and nine of quassia, and he examined the results. He found that the strength of these infusions, as measured by the extractive matter, varied in the calumbas from 56 to 166, and in the case of the quassias from 2½ to 26. And still the conscientious dispenser will go on declaring that if you want your mixtures to be perfectly reliable and uniform you must always employ fresh infusions.

THE SALE OF PHOTOGRAPHIC POISONS.

The Pharmacy Act and its provisions respecting the sale of poisons seems to be rising in public estimation in those latter days. The *Pall Mall Gazette* of last Tuesday published a prominent article entitled "State-aid in Poisoning. By one who regrets it." The competence of the *P. M.* writer may be estimated when we state that the main object of his article is to demand that the provisions of the Pharmacy Act shall be made applicable to other traders as well as to chemists. According to him, at present it is only the chemist and druggist who need obey these provisions; other traders can do as they like. "It is little less than scandalous" (to use his own language) that a person with such very hazy notions should be allowed to so mislead that section of the community which depends for its enlightenment on the *Pall Mall Gazette*. He writes principally in regard to the sale of poisons by dealers in photographic goods; but if he is even a reader of the photographic journals, he ought to have known that actions have been taken to suppress this dangerous form of trading. It may be taken that for the moment the Pharmaceutical Society would have the sympathy of this organ of public opinion in its crusade against the illegitimate sale of poisons if it could be got to understand it; but there is nothing to guarantee that the next time the subject is dealt with it may not be marked by equal ignorance and with prejudices just the other way.

"KLORODYNE."

Messrs. T. Kay (Moorfield), G. A. Shaw (112 Bramall Lane), and Kay Brothers, Limited (St. Petersgate Mills), Stockport, have obtained a patent (No. 16,496, 1892), for a new and improved method of preparing "chlorodyne," whereby it is formed into a solution which does not separate into different parts. By this means the danger which exists in the administration of it without previous agitation is avoided. To distinguish between the two preparations the patentees spell the word "klorodyne." The following is the formula:—

Chloroform	120 fluid parts
Ethyl alcohol	300 " "
Ether	30 " "
Essential oil of peppermint	1 " "
Hydrochlorate of morphine ..	2 parts
Glycerine	240 fluid parts

The hydrochlorate of morphine, essential oil of peppermint, chloroform, and ether are dissolved in the ethyl alcohol; the alcoholic solution so formed is added to the glycerine, in which it is soluble, forming a perfectly homogeneous liquid.

The patentees claim "the homogeneous combination of an alcoholic solution of chloroform, morphine, ether, and essential oil with glycerine."

SANITATION IN MECCA.—The Turkish Government is doing its utmost to minimise the danger of the outbreak of cholera epidemics among the pilgrims who visit Mecca and other holy places of Islam. The equipment of several new lazarettos, of which the creation at points leading to the chief places of pilgrimage has been ordered, is proceeding with the greatest possible speed. Two disinfecting-stoves were ordered some time ago for the asylum and hospital which it is proposed to build in the Hedjaz (the province of which Mecca is the chief town). One of these stoves has just been embarked on board the same steamer which is to convey to Djeddah the special mission appointed to superintend the construction of the projected pilgrims' asylum, hospital, and other establishments. The sum of about T50,000*l.* has been granted by the Sultan for carrying out these works.

REVIEWS

A Bird's-eye View of Hahnemann's Organon of Medicine. By John H. Clarke, M.D. London: Homœopathic Publishing Company. 6*d.*

"Hahnemann's Organon" is in a sense one of the classics of medicine; that is to say, it is one of those books which everybody interested in medical literature ought to have read, but which, as a matter of fact, scarcely anybody ever does read. Dr. Clarke's brochure will enable some of these people to pretend they have read it, and it is entitled to this amount of credit—namely, that it is so sufficing that nobody is likely to have the least desire to read any more of the "Organon" itself after it. Dr. Clarke is injudicious enough to smear his sketch with such absurd praise of the original as to satisfy the most careless reader that his critical faculty is, in this case at least, entirely subservient to his blind faith. He compares the "Organon" to the aphorisms of Hippocrates, with the result that he finds it to be as the broad daylight is to the dim twilight. "Hippocrates' aphorisms may be described as a well-ordered collection of excellent tips; Hahnemann's constitute an organic philosophy of medicine." Further on we are told that "for scope, profundity, originality, and practicability the world has never seen the like" of the "Organon." These remarks, we may note (though we are not indebted to Dr. Clarke for the information), are made of the great work which unfolds the doctrine of itch as the source of seven-eighths of the true chronic diseases which afflict humanity, and to which the world is also indebted for that other marvellous doctrine—announced without an atom of proof—of the dynamisation of medicines. There was originality enough truly in these teachings, but not many of Dr. Clarke's co-disciples even are disposed to credit them with much profundity. The *similia similibus* dogma, which is of course the basis of the "Organon," is more satisfactorily argued out, but the residue of the 294 sections of the wondrous work are just about such commonplace stuff as any medical lecturer or journalist of the present day could spin out with the greatest facility. Dr. Clarke recklessly quotes a dozen of the master's platitudes, and it can only be wondered at that a writer of such acumen as he is on other topics can see in these paragraphs anything which makes them even worthy of reprinting, not to say of the extravagant eulogies which he pronounces upon them.

Dictionary of the Active Principles of Plants, Alkaloids Bitter Principles; Glucosides: their Sources, Nature and Chemical Characteristics, with Tabular Summary Classification of Reactions, and full Botanical and General Indexes. By Charles E. Sohn, F.I.C., F.C.S. London, 1894: Baillière, Tindall & Cox. 192 pp. 10*s.* 6*d.*

We have quoted the full title of this work as the best indication of its scope. It may be described as a test-book rather than a text-book, for the author does not attempt any description of the isolation of the specific principles. For that reason the dictionary is wanting in the information which is probably of greatest value to pharmacists and pharmacologists. Inferentially, however, they may obtain what is wanted from the lists of precipitants which are given under the principles, but the behaviour of alkaloids, &c., in the pure state often differs from what is the case when we deal with solutions containing other organic substances, so we can only regard the omission referred to as regrettable.

We do not doubt in the least that the author has been at great pains in compiling the dictionary, nor do we question its intrinsic value, but we are disappointed in finding no evidence of personal attempt to settle ambiguous points. Occasionally we notice entirely opposite characteristics stated by different authors, but Mr. Sohn gives them without qualification. It is also apparent that he has not had complete access to pharmaceutical and pharmacological literature, which always is more trustworthy in regard to this subject than the literature of pure chemistry. For example, under "*Lobelia inflata*" we do not find mention of the important work of J. U. Lloyd; under "Strophanthus" Fraser's complete monograph (Trans. R.S.E.) is not referred to. Acquaintance with the latter would have modified what Mr. Sohn says of Strophanthus principles—the ready hydrolysis of strophanthin with water alone, for example. We observe a slip in the Edinburgh Professor's name, "J. R. Fraser" it is given. There are several other mistakes of the same character, Mr. A. W. Gerrard coming out "Gerard" on page 47 and "Gerrad" on page 96, thus confirming our supposition that the author's acquaintance with pharmacy is limited. Other facts which strengthen that view are the omissions, amongst them *Andira Araroba* and *Chrysarobin*, *xanthaline*, the highly interesting opium alkaloid, the existence and properties of which were made known early last year. Taking the Dictionary as it is, we can only regard it as useful, especially to the analytical chemist, but at the same time we regret that there are so many little faults attached to it.

Western Australia in 1893. By Francis Hart. London. Edward Stanford. Paper covers, pp. 276. 2*s.*

Handbook of Western Australia. By P. Callaghan, Jun. Western Australia Property Company, Melbourne. Paper covers, pp. 52.

It is only recently that the colony of Western Australia has begun to figure regularly in our "Australasian News" column. Representative government was granted to the country about two years ago, and that event was quickly followed by the discovery of gold reefs of great promise in the Murchison and Coolgardie districts. Adventurers from all parts of Australia are flocking into the south-western corner of the Continent, and, although the great Antipodean trade depression has not left the colony quite untouched, the past year—so Mr. Francis Hart tells us—has been one of great progress, instanced by the laying-out of townships and the "proclamation" of gold-bearing lands. Albany, Perth, and Freemantle, the three "old" cities of Western Australia, do not, according to our information from Australia, offer much inducement to pharmaceutical immigrants at the present time. But the "gold-rush" and the improving communication with the interior are calling fresh settlements into being almost daily, and in all probability the able-bodied and venturesome pharmacist who is prepared to rough it, and if need be to turn his hand to whatsoever it findeth to do, might probably do worse than inquire what prospects the colony of the Black Swan badge has to offer. In Mr. Hart's handbook he will find a considerable fund of information, some tolerable illustrations and a very fair map of a country which, in the classic phrase of modern commerce, is "waiting to be opened up." Like most handbooks of this kind Mr. Hart's probably errs somewhat on the side of optimism, but for that failing allowance may be made. In our drug-markets Western Australia is at present known only as the producer of small quantities of eucalyptus oil, sandalwood oil, and certain varieties of acacia gum. According to Mr. Hart, 1,530*l.* worth of sandalwood oil (from *Santalum cygnorum*) was exported from the colony in 1891. The average export of the wood itself (mostly to the Straits Settlements and to China, where it is used for carving and incense) is 6,000 tons a year. The *Acacia microbotrya*, or manna-tree gum, which is found on portions of the coast near Bunbury, yields an exudation which, it is said, might advantageously replace the manna of commerce. Sometimes 50 lbs. of the gum are obtained from a single tree. Of *Eucalyptus caulophylla*, which yields the red gum, there are 800 square miles in the forest-belt; of the white gum (*E. redunca*) 10,000 square miles, and of the York gum (*E. loxophleba*) 2,400 square miles.

Mr. Callaghan's handbook is also illustrated and gives information of much the same nature as Mr. Hart's, only rather more buoyant still in tone. This is accounted for, no doubt, by the fact that this work is issued in the interests of the W. A. Property Company. It is good reading, nevertheless, especially those parts in which the life and experiences of the early settlers are described and contrasted with the over-development of Australian city-life at the present time.

NEW BOOKS.

THE following new books of interest to readers of THE CHEMIST AND DRUGGIST have been published recently. Mention of a publication in this list does not preclude a subsequent review of any book.

Aikman, C. M.—*Manure and the Principles of Manuring.* (Blackwood & Sons.)

Billroth T.—*The Care of the Sick at Home and in the Hospital : A Handbook for Families and for Nurses.* Third edition. Post 8vo. Pp. 326. 6*s.* (Sampson Low.)

Brewis, N. T.—*Outlines of Gynæcological Diagnosis : For the Use of Students and Practitioners in Making Examinations.* With 20 illustrations. 8vo. Pp. 80. 2*s.* 6*d.* (Clay, Edinburgh.)

Butschli, O.—*Investigations on Microscopic Foams and on Protoplasm.* Authorised translation by E. A. Minchin. 8vo. Pp. 386. 18*s.* (Black.)

Caro, N.—*Darstellung von Chlor und Salzsäure.* Large 8vo. Paper covers. Pp. 116. Illustrated. 3m. [Robt. Oppenheim (Gustav Schmidt), Berlin.]

* Clark, C. H.—*Practical Methods in Microscopy.* Illustrated. 12mo. 7*s.* 6*d.* (Sampson Low.)

Dutton, T.—*Food and Drink Rationally Discussed.* Post 8vo. Pp. 130. 2*s.* (Kimpton.)

† Graham-Otto.—*Ausführliches Lehrbuch der Chemie.* Vol. I. Physikalische und Theoretische Chemie. Section III. Part I. 8vo. 10*s.* (Williams & Norgate.)

Grant, Surgeon-captain A. E.—*The Indian Manual of Hygiene*, being King's "Madras Manual of Hygiens" revised, regrranged, and in great part rewritten. Vol. I. (Higginbotham & Co., Madras.)

Jeaffreson, C. S.—*Notes on Nursing in Eye-diseases.* Post 8vo. Pp. 80. 2*s.* 6*d.* (Wright, Bristol.)

* Kahler, C.—*How to Treat your own Feet* : a Treatise on the Human Foot. Illustrated. London. 4*s.* 6*d.* (Sampson Low.)

* Keating, J. M., Hamilton, H., and others.—*A New Unabridged Pronouncing Dictionary of Medicine* : being a Voluminous and Exhaustive Handbook of Medical and Scientific Terminology, with Phonetic Pronunciation, Accentuation, Etymology, &c. Second edition. 8vo. 21*s.* net. (Sampson Low.)

† Kraus, Greg.—*Geschichte der Pflanzeneinführungen in die europäischen botanischen Gärten.* Crown 8vo. 3m. (Williams & Norgate.)

Kübling, Dr. O.—*Handbuch der stickstoffhaltigen Orthocondensations producte.* Large 8vo. Paper covers. Pp. 628. 14m. [Robt. Oppenheim (Gustav Schmidt), Berlin.]

* Ladd, G. T.—*Psychology, Descriptive and Explanatory* : a Treatise on the Phenomena and Development of Human Mental Life. 8vo. 21*s.* (Sampson Low.)

† Landolt, H., and Börnstein, R. — *Physikalisch-chemische Tabellen.* Second enlarged edition. Imp. 8vo. 1894. Cloth. 24*s.* (Williams & Norgate.)

Middendorf, E. W.—*Peru.* I. Band. Large 8vo. Paper covers. Pp. 638. Illustrated. 16m. [Robt. Oppenheim (Gustav Schmidt), Berlin]

Moride, Edouard.—*Annuaire de la Savonnerie et de la Parfumerie,* 1893-94. Deuxième édition. 8vo. Cloth. Pp. xiv. and 362. Illustrated. 8 francs. (Baudry & Cie., Paris.)

Morten, Honnor.—*The Nurses' Dictionary of Medical Terms and Nursing Treatment.* Fifteenth thousand. Demy 16mo. Pp. 140. 2*s.* (Scientific Press, Limited.)

Norris, W. F., and Oliver, C. A.—*A Text-book of Ophthalmology.* Illustrated with 5 coloured plates and 357 woodcuts. Royal 8vo. Pp. 638. 25*s.* (Pentland.)

Pattison Muir, M. M.—*The Alchemical Essence and the Chemical Element* ; an episode in the quest of the unchanging. 8vo. Cloth. Pp. 94. 4*s.* 6*d.* (Longmans & Co.)

* Pepper, W.—*An American Text-book of the Theory and Practice of Medicine* : for Practitioners and Students. Illustrated. Two volumes, 8vo. 42*s.* net. (Sampson Low.)

Preston, T.—*Theory of Heat.* 8vo. Pp. 730. 17*s.* (Macmillan.)

† Schimpfky, R.—*Unsere Heilpflanzen in Bild und Wort.* Crown 8vo. Pp. 92. Coloured Plates. 5m. 50pf. (Williams & Norgate.)

* Starr, L., and Westcott, T. S.—*An American Text-book of the Diseases of Children.* Illustrated. 8vo. London. 31*s.* 6*d.* (Sampson Low.)

The Calendar of the Pharmaceutical Society of Ireland, 1894. Vol. XVIII. Paper covers. Pp. x. and 187. Small 8vo. 1*s.* (Chas. Chambers, Dublin.)

Tyndall. J.—*Faraday as a Discoverer.* Fifth edition. Post 8vo. Pp. 198. 3*s.* 6*d.* (Longmans.)

Vogel, Dr. E.—*Praktisches Taschenbuch der Photographie.* Third edition. Illustrated. Cloth. Robert Oppenheim (Gustav Schmidt), Berlin. 3 marks.

† Witt, O. N.—*Die Deutsche chemische Industrie in ihren Beziehungen zum Patentwesen.* Crown 8vo. 5m. (Williams & Norgate.)

Zwick, Dr. H.—*Optical Experiments.* Royal 8vo. 2*s.* (Newmann.)

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* *These books have been published in the United States.*

† *These books have been published in Germany.*

New Companies.

MURPHY (LIMITED).—Registered in Dublin. Capital 500*l.*, in 1*l.* shares. Objects: To carry on the business of pharmaceutical chemists, chemists and druggists, oil importers, manufacturers, dealers, &c. The first director is Wm. J. Murphy.

INCORPORATED MEDICAL-PRACTITIONERS' ASSOCIATION.—Licensed by the Board of Trade and limited by guarantee. Objects: To protect, support, and safeguard the interests of legally-qualified medical practitioners; to obtain more efficient representation for general practitioners on the General Medical Council and in Parliament, &c. The association shall consist of duly-qualified practitioners as members, and students of medicine as associates. The subscribers to the memorandum are:—F. H. Alderson, Hammersmith, M.D.; J. W. J. Oswald, 245 Kennington Road, S.E., M.D.; G. J. Eady, The Elms, Enfield, M.D.; E. O. Fountain, Chiswick, M.D.; B. Fenwick, 20 Upper Wimpole Street, W., M.D.; F. J. Allan, 53 Devonshire Street, W., M.D.; R. J. W. Oswald, 185 Clapham Road, S.W., M.R.C.S.

FOREIGN CHEMICAL AND ELECTROLYTIC SYNDICATE (LIMITED).—Capital, 3,000*l.* in 200 "A" shares of 10*l.* each, and 1,000 "B" shares of 1*l.* each. Objects: To enter into a certain agreement, to acquire any patents or inventions relating to the manufacturing, storage, and utilisation of chemicals or chemical products, and to carry on business as manufacturing analytical scientific and general chemists, &c. The first subscribers (who take one share each) are:—H. K. Baynes, 52 Gloucester Crescent, W., solicitor; G. Linnet, 20 Carson Road, Dulwich, S.E., clerk; C. Rower, 55 Ovington Street, S.W., clerk.; J. Thompson, 90 Shaftesbury Road, Crouch Hill, N., clerk; A. E. Jennings, 2 Ravelcy Street, N.W., clerk; G. C. Daintry, 7 Thornsett Road, Anerley, S.E., solicitor; F. Edwards, 235 Stanhope Street, N.W., clerk. The first directors are C. H. M. Lyte and H. K. Baynes. Remuneration 100*l.* per annum each; qualification, 125*l.*

W. & H. M. GOULDING (LIMITED). — Registered in Dublin. Capital 250,000*l.*, in 5*l.* shares. Objects: To carry on the business of chemists, makers and manufacturers of chemical manures and chemicals, and to make, purchase, or sell all materials necessary for the businesses mentioned above. The first subscribers (who take one share each) are:—Wm. Josua Goulding, D.L., 5 Fitzwilliam Square, Dublin; Francis Cade, J.P., Frankfort, Cork; Stanley Harrington, J.P., Trafalgar, Cork; Joseph Hone Roebuck, Grove, Donnybrook, Dublin, gentleman; Joseph Hone Roebuck, 12 Upper Mount Street, Dublin, solicitor; John G. Nutting, J.P., 16 Bachelor's Walk, Dublin; E. A. Goulding, 4 Plowden Buildings, Temple, London, E.C. The first directors are Wm. Josua Goulding, Francis Cade, Joseph Hone, John R. Lloyd, Stanley Harrington, John G. Nutting, Edward A. Goulding. Qualification 1,000*l.*, of which 500*l.* at least must be ordinary shares. Registered office, The Glen, Cork.

ELECTRO-CHEMICAL COMPANY (LIMITED). — Capital, 200,000*l.*, in 5*l.* shares, of which 26,000 are preferred and 14,000 ordinary. Objects: To acquire a certain patent for improvements in the electrolytic production of caustic soda, caustic potash, and other products from their salts, and to establish chemical and alkali works, and to manufacture, prepare, and deal in caustic soda, caustic potash, soda ash, bleaching powder, &c. The first subscribers (who take one share each) are:—L. Evans, 65 Old Bailey, E.C., papermaker; L. Field, Lambeth Marsh, soap merchant; T. M. Dunster, 202 Upper Thames Street, E.C., paper-agent; W. L. Wakefield, 202 Upper Thames Street, E.C., paper-agent; W. G. Taylor, 83 Queen Victoria Street, E.C., chemical-agent; T. Hitchcock, 134 Palmerston Buildings, E.C., accountant; R. Fagan, 220 Cromwell Road, S.W., corn merchant. The first directors are: L. Evans, L Field, and M. Pirie. Qualification, 500*l.* Remuneration, 300*l.* per annum each, with 200*l.* extra for the chairman. Registered office, 57 Old Broad Street, E.C.

Scientific Notes:

Chemistry, Pharmacy, Botany, Materia Medica, &c. Original, Selected and Translated.

HAZELNUT OIL.

P. Soltsien, in the *Pharmaceutische Zeitung*, gives some particulars of a sample of hazelnut oil examined by him. The oil possesses a bland pleasant taste, slight aroma, and bright golden colour. It is a non-drying oil, of a specific gravity of 0·9164 at 15° C., and quickly formed a hard, faint, yellowish mass when subjected to the eloidin test. The oil contains 0·0035 per cent. of free fatty acids, its saponification number is 191·4, and its iodine number, 83·2. The oil only congeals after prolonged exposure to a temperature of − 20° C., and, after congealing, does not again liquefy until the temperature is raised to + 4° C. The freezing-point of the fatty acids is + 9°, their melting-point 17°. At 15° C. the fatty acids dissolve in equal volumes of spirit of wine, and remained in solution upon further dilution with alcohol. The oil does not give any specific colour-reactions when treated with acids, acid mixtures, or hydrochloric acid and sugar. Its technical and medicinal value probably equals that of sweet-almond oil, the adulteration of which by means of hazelnut oil it would be difficult to detect.

OIL OF LAVENDER.

Ed. Hirschsohn is contributing to the *Pharmaceutiche Zeitschrift für Russland* a useful series of papers on essential oils, in the course of which he gives particulars of samples of lavender oil which have been obtained from authentic commercial sources. It will be seen from the following table that the fractionation of the oils resulted in some valuable figures:—

	—		1. Destillate	2. Destillate	3, &c. Destilate	Total	Solubility in Alcohol			
							1. Destillate		2. Destillate	
								Per cent.		Per cent.
1	Ol. lav.	Mitch	26	20	47	93	2·4 vol.	70	2 vol.	70
2	,, ,,	,,	30	20	34	84	8 ,,	70	1·8 ,,	70
3	,, ,,	extra.	20	16	35	71	1·8 ,,	70	1·6 ,,	70
4	,, ,,	superf.	30	24	43	97	3·4 ,,	80	2·4 ,,	70
5	,, ,,	,,	20	20	45	85	2·2 ,,	70	2 ,,	70
6	,, ,,	I.	36	20	39	95	5·6 ,,	80	1·8 ,,	70
7	,, ,,	Drome	26	20	43	89	1·2 ,,	80	2·4 ,,	70
8	,, ,,	Gallic.	30	18	35	93	6 ,,	80	2 ,,	70
9	,, ,,	M. Blanc	24	22	43	89	15 ,,	70	1·8 ,,	70
10	,, ,,	Alpes	18	16	53	87	1·4 ,,	80	1 ,,	80
11	,, ,,	,,	14	14	49	77	1 ,,	80	1 ,,	80
12	,, ,,	ordin.	28	20	51	99	14 ,,	80	1 ,,	80
13	,, ,,	Gallic.	26	20	39	85	3·6 ,,	80	2·8 ,,	70
14	,, ,,	,,	18	18	59	95	1·4 ,,	80	3 ,,	70

The important point to notice is the ready solubility of the first distillate in 70-per-cent. spirit—viz., one part of the oil in 2 to 3 parts of the spirit. The solubility decreases very markedly on the addition of turpentine. Thus 20 per cent. of turpentine added to a pure oil gave a first distillate which was soluble to the extent of 1 in 12 of 70-per-cent. alcohol, and 50 per cent. of turpentine reduced the solubility to 1 in 25 of 80-per-cent. alcohol. It is also noticeable that most of the turpentine distils in the first fraction.

ASSAY OF MANGANESE OXIDES.

Last winter, Mr. D. B. Dott showed how oxygen could be made without heat by allowing hydrogen-peroxide solution to react with black oxide of manganese. A similar reaction is utilised by Mr. Adolphe Carnot (*Comptes Rendus*, cxvi. 1295), for assaying manganese oxides, but as the quantity of oxygen liberated from hydrogen peroxide is indefinite, an acid is added whereby the quantity becomes definite—viz., double the available oxygen in managese peroxide above MnO. M. Carnot's process is to fix on a suitable stand a 150-c.c. flask having a caoutchouc stopper with two perforations. Through one of these passes a straight tapped funnel tube or phial with a glass stopper, the point of which must descend to the bottom of the flask. The other aperture has a gas delivery-tube bent four times, ending in a graduated gas-jar, filled with water and arranged on the trough. We introduce into the flask 1 gramme of the manganese oxide reduced to a fine powder, then about 30 c.c. of water and 20 c.c. of nitric acid, which decomposes any carbonates present in the sample. We allow the carbonic acid to escape entirely; then insert the stopper, leaving the stopper open. We can then observe that not only the graduated jar, but also the delivery-tube is filled with water up to the point where it emerges from the water-trough. Close the stopper, pour into the funnel 20 c.c. of 10 vol. hydrogen peroxide, allowing it to flow gently into the flask, taking care to close the stopper as soon as the last traces of peroxide have passed. The action takes place at once without heat, and the escape of oxygen, which is at first very rapid, is completed in a few minutes if care is taken to shake the flask from time to time. Nothing then remains but to measure the volume of oxygen liberated and from it calculate the oxygen value of the manganese oxides used. For absolute accuracy the following is the formula for calculation, taking Vt as the gaseous volume, measured at the temperature t and the atmospheric pressure H. The gas being saturated with moisture, the tension h is allowed according to the temperature. As the weight of 1 litre of dry oxygen at 0° and at 760 m.m. is 1·4298 gramme, then we calculate in grammes the weight, p, of available oxygen in 1 kilo. of ore by means of the formula:—

$$p = \tfrac{1}{2}Vt \times 1{\cdot}4298 \times \frac{H-h}{760} \times \frac{1}{1+0{\cdot}00367t}.$$

THE ACTIVE PRINCIPLES OF "IRIS FLORENTINA."

MM. F. Tiemann and G. De Laire have examined the root of this plant and have reported their results to the Academy of Sciences (Paris). From it they have obtained a glucoside, iridin by treating the alcoholic extract of with a mixture of acetone and chloroform of density 0 95. The iridin crystallises in small white needles, fusing at 208°, and corresponding to the empirical formula $C_{24}H_{26}O_{13}$. Heated under pressure with sulphuric acid diluted with weak alcohol, it decomposed into glucose and a crystalline body *irigenine*. This forms alcoholic ethers, and also gives rise to two series of acid ethers. Through the action of alkaline hydrates, it absorbs three molecules of water, and then splits into three bodies—viz. formic acid, an acid phenol termed *iridic acid*, $C_{10}H_{12}O_5$, and a phenol termed *iretol*, $C_7H_8O_4$. The latter body is rapidly decomposed by the oxygen of the air when in an alkaline solution. When iridic acid is heated above its point of fusion, it splits into molecule of carbolic acid and a colourless oil distilling at 239° by cooling. It solidifies in large crystals fusing at 57°, constituting a well-defined new phenol now termed *iridol*.

IODIDE OF NITROGEN.

There has always been a doubt about the formula of that remarkably explosive substance—iodide of nitrogen—which is not surprising when we consider its terribly explosive nature. Dr. Senhay, of Budapest, has now succeeded in proving its composition to be NHI_2, by replacing the hydrogen atom by silver. This silver compound is readily obtained by adding powdered oxide of silver or an ammoniacal solution of silver nitrate to iodide of nitrogen suspended in water. It is a black flocculent substance, which is quite as explosive as iodide of nitrogen itself. When carefully dried the least rise of temperature provokes explosion. It also detonates upon being struck or even when brought into gentle friction with any other substance, When warmed under water, or when treated with dilute acids, it is quietly decomposed, silver iodide being deposited, free iodine liberated, and free nitrogen escaping with effervescence. The relative amounts of these products of decomposition conclusively prove the compound to possess the composition $AgNI_2$. The existence of the compound HNI_2 is thus fully demonstrated, and whether or not the compounds NI_3 and NH_2I are likewise capable of formation under different experimental conditions is a question which doubtless further work will elucidate.

THE SWISS PHARMACOPŒIA.

In our issue of February 10 we commented in general terms upon the new edition of the Swiss Pharmacopœia which has recently been published, our remarks being confined to the Pharmacopœia proper. In the appendix there is a series of 17 tables, most of which are of the usual character, such as the specific gravities and percentages of the various acids and alkaline solutions, lists of reagents and volumetric solutions; solubilities in water, alcohol, and ether; a dose table; a table giving the strength, active principles, and maximum doses of the more potent medicines in the Pharmacopœia; Baume's hydrometer table; saturation tables; a useful table showing variation with temperature of the specific gravities of certain liquids, such as acids, ether, chloroform, &c.; and a list of synonyms.

The sp. gr. variation table strikes us as one which should be useful, and which might meet the objections raised by Mr. Dott to the present standard temperature of 15·5° C. of our Pharmacopœia. The following are examples from the Swiss table, which consists of 15 items :—

—	10°	12·5°	15°	17·5°	20°
Acid. hydrobrom. dil. ..	1·079	1·078	**1·077**	1·077	1·076
Æther	0·725	0·723	**0·721**	0·718	0·715
„ aceticus	0·908	0·906	**0·904**	0·902	0·900
Alcohol absolutus ..	0·802	0·799	**0·797**	0·795	0·793
Chloroform	1·496	1·492	**1·487**	1·482	1·477
Liquor ammoniæ ..	0·962	0·961	**0·960**	0·959	0·959

The excellent position which the Pharmacopœia takes in regard to assay processes, and in methods for ascertaining the purity of chemicals, has been referred to as distinguishing the book, for it gives it rank with the foremost Pharmacopœias of the day. We propose to give brief notes on the drugs, chemicals, and galenical preparations which can be included in this category, and on some materials for which desirable tests have been added.

Drugs.

Adeps Suillus.—M.P. 40° C.; S.G. at 100° C. 0·862; silver-nitrate test for cotton-seed oil—viz., lard 6 grms. added to $AgNO_2$ solution 5 grms., dilute nitric acid 2 grms., ether 2 grms., and alcohol 10 grms. No coloured ring should be produced between the layers of liquid kept warm.

Aloë.—African aloes from (amongst other species) *A. Africana* (Miller), *A. spicata* (Haworth), and *A. vera* (L.). The solution in dilute alcohol (1–4) gives yellowish ppt. with bromine-water (bromaloin), brown with ferric chloride, and imparts a yellow colour to carbon disulphide, benzol, or petroleum ether. Yields not more than 1 to 1·5 per cent. of ash, and not less than 40 per cent. of aqueous extract. These tests exclude Cape aloes, but are applicable to Natal aloes.

Ammoniacum should not yield more than 5 per cent. of ash. Colour-tests also given.

Asafœtida.—B.P. description closely followed.

Balsamum Copaivæ.—From various species of Copaifera. S.G. not less than 0·960, and should yield 20 per cent. of essential oil. Tests given for turpentine, gurjun balsam, &c. Peruvian and Tolu balsams are also carefully defined and tested, the latter being provided with a test for turpentine.

Cantharis.—Maximum of ash, 8 per cent. Alcoholic extract should leave a residue of 9 to 10 per cent.

Catechu, treated with alcohol, should not leave more than 15 per cent. of vegetable *débris*, dried at 100° C., loses not more than 20 per cent., and the ash amounts to 6 per cent. These tests are an improvement upon the German, but Swiss catechu is from *Acacia Catechu* (Will.), and *A. Suma* (Kurz.), and the German is Gambier.

Cera.—Directions are given for bleaching wax, and very full tests for adulterants of cera flava.

Cetaceum.—Following the German Pharmacopœia the alcoholic solution should not give an acid reaction (stearic acid), and only a trace of fatty acids is allowed.

Cortex Cinchonæ.—Bark from *C. succirubra*, *C. Ledgeriana*, and *C. Calisaya*, cultivated in India, Ceylon, and Java, and containing 5 per cent. of alkaloids, including 1 per cent. of quinine. The assay process is: Shake 12 grms. of the drug (No. V. powder) with 120 grms. of ether five minutes, then add 10 c.c. ammonia solution; allow to stand half an hour, shaking occasionally: add 10 c.c. water, and shake again for five minutes. Decant 100 grms. of the clear liquid into a 300-c.c. flask containing 50 c.c. water and 2 c.c. dilute sulphuric acid. Shake. Separate the acid solution which contains the total alkaloids, and heat to drive off ether. Transfer this once more to a separation apparatus, and shake well with a mixture of ether 10 c.c., and chloroform 20 c.c., and make the mixture alkaline with ammonia. Shake vigorously for five minutes, and allow to separate. If a small portion of the alkaline liquid on acidification gives a precipitate with iodine, shake once more with 15 c.c. of the ether-chloroform. Now evaporate the ether-chloroform mixture in a tared capsule, dry at 100° C. for half an hour, and weigh. The weight should not be less than 0·5 grm. To prove the presence of 1 per cent. of quinine the alkaloidal residue is dissolved in a little water by aid of acetic acid, and made up to 100 c.c. with water. One c.c. of this solution is mixed with 10 c.c. of 1-per-cent. bromine-water, and 5 to 10 drops of ammonia solution added. A greenish-blue coloration should be produced.

Cortex Cinnamomi Chinensis (Cassia); Cortex Cinnamomi Zeylanicus (Cinnamon).—The following distinguishing test is given, using 1-in-10 decoctions, with a few drops of iodine tincture or solution. *Cassia*: A persistent dark-blue colour, and ultimately a precipitate of the same colour. *Cinnamon*: A transient blue colour, and ultimately a brownish precipitate.

Crocus.—*Test*: A centigramme of saffron powdered and triturated with 1 c.c. of water imparts a bitter but not sweet taste to it, and suffices to colour a litre of water a beautiful yellow colour. Dried at 100° C. it loses not more than 14 per cent. of its weight, and when incinerated leaves not more than 7·5 per cent. of ash.

Galbanum should give not more than 8 per cent. of ash.

Guarana.—*Assay*: A mixture of powdered guarana 5 grms., and quicklime 2 grms., is mixed with water 10 grms. and dried. The powdered residue is boiled in a flask (with reflux condenser), first with 40 grms. and then with 30 grms. of chloroform. The chloroform extracts are then mixed with 20 grms. of water, the chloroform distilled off, and the aqueous solution filtered to free it from resin, &c. The filtrate on evaporation should yield, when dried at 100° C., 15 centigrms. of caffeine.

Kamala should not yield more than 6 per cent. of ash.

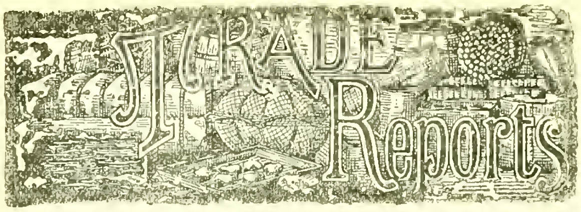
Manna, when dried on a water-bath, loses not more than 10 per cent. of its weight, and yields to boiling alcohol 15 to 20 per cent.

Mel.—S.G. 1·4; ash 0·25 to 0·35 per cent., which gives but feeble reactions with silver and barium nitrates. Mixed with an equal part of ammonia solution, the colour is not changed, nor on the addition of sulphuric acid is the colour changed to a brownish black in the course of an hour (cane sugar). Mixed with 3 parts of water the clear liquid does not give a blue colour with tincture of iodine, nor is a precipitate formed when it is mixed with 10 per cent. of alcohol (dextrin).

Olea.—Tests for oils are not so numerous as in the U.S.P. The specific gravities are substantially the same, with the following exceptions:—Ol. caryoph. 1·055–1·065 (U.S.P. 1·060–1·067), ol. jecoris aselli 0·926–0·931 (U.S.P. 0·920–0·925), ol. juniperi 0·85–0·86 (U.S.P. 0·85–0·89), ol. sinapis 1·02–1·025 (U.S.P. 1·018–1·029). Other differences are more trifling. Ol. eucalypti is not included in the Pharmacopœia, nor is eucalyptol.

The "Vaseline Shave" is one of the latest American tonsorial luxuries. Perfumed vaseline is the thing for those who have tender skin. The idea is not new, for we mentioned it several years ago, but it is novel for barbers to take it up.

Some American Analysts do not seem to be particularly smart. One in Cincinnati has reported on various drugs bought in the city, and puts down Epsom salts as "about one-half strength." The good man seemed to think that anhydrous $MgSO_4$ would please people, but he knows now that he has to take the salts with water.



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., *February* 22.

Up to the present the year has by no means fulfilled the expectations of those who looked for a general revival in trade. The drug-market, excepting in two or three departments, is remarkably dull and there is a general complaint of want of orders. The chief exceptions to this general quietness are in the two articles, opium and ipecacuanha. In both cases the speculative movement which keeps up the prices has its origin in New York, the advance in the case of opium being mainly due to the belief that the Tariff Bill, when passed, will make crude opium, which is now on the free list, dutiable to the extent of $1 00 per lb., which represents about 40 per cent. of the present average value. In sympathy with the improved position of opium, its salts—notably morphia and codeia—are dearer. Cod-liver oil is tending higher owing to the favourable reports from Norway, and there is some expectation that santonine may advance. Crude camphor, and with it the refined article, are still falling in price, menthol is unsettled, and most varieties of acacia gum are declining. Quinine closes easier. The improvements in the chemical market include cream of tartar, carbonate of ammonia, oxalic acid, and refined saltpetre, and sulphate of copper also shows signs of improvement. On the other hand chlorate of potash and soda crystals are easier, and the fall in silver has affected the value of the nitrate. Quicksilver is slow of sale and tending easier.

The Bank Rate was reduced to-day from 2½ to 2 per cent., and bar silver has fallen to 28⅜*d.* per oz., while Mexican dollars are quoted at 28⅜*d.* The exchanges are as follows:—Bombay 1*s.* 1$\frac{9}{16}$*d.*, Calcutta 1*s.* 1$\frac{9}{16}$*d.*, Hong Kong (4 m. 2*s.* 1¼*d.*), Shanghai (4 m. 2*s.* 10⅝*d.*), Singapore and Penang (4 m. 2*s.* 1⅜*d.*), Yokohama (4 m. 2*s.* 1¾*d.*), Valparaiso 12¾*d.*

Acid (Carbolic).—Firm with a slightly higher tendency. Crystals, 34° to 35° are offering at 5¼*d.* to 5½*d.*; 39° to 40°, at 6*d.* to 6¼*d.* The price of liquid carbolic runs according to strength, from 1*s.* 6*d.* down to 1*s.* 1*d.* per gallon.

Acid (Citric).—Quiet. English offers at 1*s.* 4½*d.* per lb.

Acid (Oxalic) remains firm at 3⅝*d.* per lb. net, London, to which it has been advanced by the combined manufacturers.

Acid (Tartaric).—Unchanged, at 10¾*d.* to 11*d.* per lb. from the English makers. Foreign acid in crystals offers at 10½*d.*, and in powder at 10⅝*d.* per lb.

Ammonia Carbonate.—Owing to the recent rise in sulphate of ammonia, the manufacturers advanced prices by ¼*d.* per lb., jars being quoted at 4*d.* and casks at 3¾*d.* per lb. Since then, however, sulphate of ammonia has been moving downwards again, but so far carbonate maintains its price.

Camphor (Crude).—Still tending downwards. Japan camphor is now offering at 105*s.* per cwt., c.i.f. terms, which is 2*s.* 6*d.* below the figure at which business was done last week.

Camphor (Refined).—The German makers, who have until now allowed only 1 per cent. discount, have agreed to sell in future upon the same terms as the English makers—viz., 2½ per cent. discount. They have reduced their prices, and now quote from 1*s.* 5½*d.* to 1*s.* 6*d.* per lb., according to quantity. A further reduction in the English makers' prices seems probable.

Cardamoms.—We understand that a sale of 20 cwt. "fair medium quality" Ceylon cardamoms has lately been made at 1*s.* per lb., c.i.f. terms.

Cascara Sagrada.—The position of this drug, already much weakened by the recent arrivals, and the sales at the last drug auctions, will not be improved by the arrival in Liverpool of 363 bags, per *Allonby*, from Portland, Oregon, U.S.A.

Chlorate of Potash is easing off, and may now be had on the spot at 7½*d.*, a decline of about ⅛*d.* since last week. There has been some talk of the impending manufacture in America of chlorate of potash by an electrical process, which is said to be just emerging from the experimental stage and under which it will be possible to sell the article in England at about half its present price, but from what we hear this process is not likely to be in working order for some time.

Cinchona.—A moderate quantity of Eastern and African barks was offered for sale on February 20. There were seven catalogues, mostly small ones, totalling up as follows:—

	Packages		Packages	
Ceylon cinchona	366	of which	247	were sold
East Indian cinchona	821	"	532	"
Java cinchona	96	"	96	"
African cinchona	182	"	182	"
South American cinchona ..	453	"	—	"
	1,918	"	1,057	"

The Eastern barks were mostly of very high average quality; those from India were almost exclusively made up of good bright yellow and grey chips and shavings. A steady tone prevailed throughout the sales, but as some of the holders appear to be sanguine of obtaining more money by adopting a waiting policy, and therefore did not press their supplies for sale, a considerable proportion was bought in. The unit keeps firm at ¾*d.* to ⅞*d.* per lb. for fair qualities.

A somewhat interesting feature of the sales was the offering of 335 bales of "soft Colombian" bark of 1883 import. This variety has not been shown at our auctions for some considerable time, and on this occasion all of it was bought in. It is said that, at the time of its importation, over 6*s.* per lb. was refused for it.

Here follow the approximate quantities of bark purchased by the principal buyers:—

	Lbs.
Agents for the Mannheim and Amsterdam works ..	81,962
Messrs. Howards & Sons	48,289
Agents for the Brunswick works	37,747
Agents for the American and Italian works	30,685
Agents for the Paris works	22,190
Agents for the Auerbach works	16,150
Agents for the Frankfort-on-the-Main and Stuttgart works..	4,480
Sundry druggists	15,675
Total quantity of bark sold	257,178
Bought in or withdrawn	165,378
Total quantity of bark offered	422,556

It should be well understood that the quantity of the bark purchased gives no indication of the amount of quinine in the bark actually secured by the buyer.

The prices secured for sound bark were:—

Ceylon Cinchona.—*Original.* Red varieties: Dull to fair dusty stem and branch chips, 1⅛*d.* to 1½*d.*; fair shavings, 1½*d.* to 1¾*d.*; dusty root, 1⅜*d.* to 1¾*d.* per lb. Grey varieties, dull small stem chips, 1⅝*d.* per lb. Yellow varieties: medium to fair bright quilly stem and branch chips, 2½*d.* to 3⅞*d.*; root, 2½*d.* per lb. Hybrid: ordinary, dull and weak stem and branch chips, 1¼*d.* to 1⅞*d.*; good shavings, 3*d.* to 3⅜*d.* per lb. *Renewed.* Red varieties:—Ordinary dull shavings, 1*d.*; fair stem chips. 2¼*d.* per lb. Good grey quilly stem chips, 3⅛*d.* per lb. Yellow fair to good bright stem and branch chips, 3⅝*d.* to 4¼*d.* per lb. Hybrid dull chips, 1¼*d.*; fair to good shavings, 2½*d.* to 3⅛*d.* per lb.

East Indian Cinchona.—*Original.* Red varieties:—Fair to good bright stem and branch chips, $1\frac{7}{8}$*d.* to $2\frac{1}{8}$*d.*; root, $2\frac{1}{4}$*d.* per lb. Grey varieties:—Sweepings, 1*d.*; small thin branch chips to good bright quilly chips, $1\frac{7}{8}$*d.* to $4\frac{3}{8}$*d.*; good bright shavings, $4\frac{1}{2}$*d.* per lb. Yellow varieties:—Small and dull branch chips, $1\frac{1}{4}$*d.* to 2*d.*; good bright ditto, $2\frac{1}{4}$*d.* to 3*d.*; thin twigs $1\frac{3}{4}$*d.* to $2\frac{1}{8}$*d.*; fair to good bright quilly chips, $3\frac{1}{8}$*d.* to 4*d.*; small to good bright spokeshavings, 2*d.* to $3\frac{1}{4}$*d*; root, $3\frac{5}{8}$*d.* to $3\frac{7}{8}$*d.* per lb. *Renewed.* Red varieties:—Dull to good bright stem and branch chips, $1\frac{7}{8}$*d.* to $2\frac{1}{4}$*d.*; grey varieties:—ordinary small to good bright quilly shavings and chips, $2\frac{5}{8}$*d.* to $5\frac{1}{4}$*d.* per lb. Yellow varieties:—good bright shavings, $4\frac{7}{8}$*d.*; medium to fine quilly chips, $3\frac{7}{8}$*d.* to $5\frac{1}{8}$*d.* per lb.

Java Cinchona.—Ninety-six packages Javanese *Ledger* bark realised $3\frac{1}{4}$*d.* to 4*d.* per lb. for crushed chips, $2\frac{1}{4}$*d.* per lb. for branch chips, and $3\frac{3}{8}$*d.* per lb. for root.

West African Cinchona.—One hundred and eighty-two bales from San Thomé (Succirubra character) brought 2*d.* to $2\frac{1}{2}$*d.* per lb. for fair to good bold quilly chips, and 3*d.* per lb. for fair rather thin quill.

South American Cinchona.—Several lots of old *soft Colombian* bark (335 bales) were all bought in at from 2*d.* to 3*d.* per lb. Bids ranged from $1\frac{1}{8}$*d.* to $1\frac{7}{8}$*d.* per lb. For a parcel of 118 bales ($\frac{1}{2}$ cwt. each) cultivated Bolivian *Calisayan* quill from Mollendo, fair quality, partly irregular, a bid of $4\frac{1}{4}$*d.* per lb. was refused.

The Ceylon Cinchona exports from January 1 to 22 were as follows:—

1894	1893	1892	1891
Lbs.	Lbs.	Lbs.	Lbs.
188,053	438,361	204,286	293,301

The exports of cinchona from Java during the second half of the year (July 1 to December 31) have been:—

—	1893	1892	1891	1890	1889
	Amsterdam lbs.	Amsterdam lbs.	Amsterdam lbs.	Amsterdam lbs.	Amsterdam lbs.
Government plantations	297,091	422,867	459,823	270,318	292,915
Private plantations	3,085,007	3,481,417	4,693,747	3,851,381	2,321,745
Totals ..	3,382,098	3,904,284	5,153,570	4,121,699	2,514,660

Cinnamon.—A sale of 100 bales (50 thirds and 50 fourths) at $5\frac{3}{4}$*d.* per lb., c.i.f. terms, February-April shipment, took place last week.

Cloves.—At auction on Wednesday 108 bales *Zanzibar* cloves sold steadily at $2\frac{11}{16}$*d.* per lb. for medium to $2\frac{7}{8}$*d.* per lb. for good fair. For delivery the demand has been strong this week at somewhat improved rates, and business has been done up to $2\frac{3}{4}$*d* per lb. for March-May, and $2\frac{25}{32}$*d.* per lb. for June-August delivery.

Cocaine.—The Convention price remains undisturbed, but there are rather more sellers in the second hand, and it is possible to purchase *Hydrochlorate* from such holders at 18*s.* per oz., which is 1*s.* below the Convention price.

Codeia.—Quite lately the British makers have had great difficulty in keeping their deliveries up to the increased requirements, but this week the supply appears to be flowing somewhat easier. It would probably be possible to buy at 23*s.* per oz. from second-hand holders.

Copper Sulphate.—A little firmer. The manufacturers report that the demand is strongly increasing, and they quote from 15*l* 5*s.* to 15*l.* 10*s.*, f.o.b. Liverpool, and from 14*l.* 15*s.* to 15*l.* 10*s.* in London.

Cream of Tartar is firmly held at 64*s.* per cwt. for best white French crystals, and 66*s.* per cwt. for German powder. News from the South of France is to the effect that the market is excited, and offers at 58*s.*, f.o.b. Bordeaux, have been refused.

Cubebs.—The exports of cubebs from Java during the half-year ending December 31 last show a considerable falling-off, compared with the last four corresponding half-years. The figures are:—

1893	1892	1891	1890	1889
Piculs	Piculs	Piculs	Piculs	Piculs
789	1,723	889	399	379

Galls.—Blue *Persian* and *Turkish* galls have been in strong demand lately, and the position has improved considerably. Bassorah galls have changed hands at from 55*s.* to 57*s.* per cwt., according to quality, good Aleppo at 55*s.*, and small ditto at 50*s.* per cwt. Green galls are selling quietly at 46*s.* per cwt. for Bassorah, and 45*s.* per cwt. for Aleppo. White kinds are neglected at from 40*s.* to 46*s.* per cwt. nominally, according to quality. The new crop of *Chinese* galls will shortly be due at the Chinese ports. In the meantime, the Hong-Kong market is reported to have been cleared, and orders cannot now be executed. The last price paid is said to have been $$18\frac{1}{4}$ per picul, for Hamburg.

Ginger.—A turning-point seems to have been reached in the receding value of Cochin ginger. At auction on Wednesday 404 packages out of 467 which were offered sold at 33*s.* per cwt. for fairly bright rough wasted of the new crop. This shows an advance of 1*s.* per cwt. on the last auction rates.

Gum Acacia.—There have been large arrivals of so-called "insoluble" gum from the Persian Gulf lately, and the stock is now very large, while the demand is unable to keep pace with the arrivals. *Soudan* (Turkey sorts) acacia gums are quiet, at 47*s.* 6*d.* per cwt. for good pale hard. A small business is reported at that figure. At to-day's auctions prices were mostly lower, genuine *Aden* gum showing a fall of about 2*s.* 6*d.* per cwt. compared with the last sales, and *Ghatti* being 2*s.* to 3*s.* per cwt. lower for common, and 4*s.* to 5*s* per cwt. for the better grades. *Soudan* gums were all bought in, except a few lots of fair hard, which sold at 45*s.* per cwt. Brown Amrad gum sold at an advance of about 1*s.* 6*d.* per cwt.—viz., 25*s.* to 32*s.* for common dark to fair amber. Common to fine pale *Kurachee* realised 34*s.* 6*d.* to 50*s*; common to fair *Ghatti*, 19*s.* to 24*s*; good to fine ditto, 35*s.* to 39*s.* 6*d.* per cwt. Common red to good reddish *Aden* sold at 17*s.* to 35*s.*; small to bold siftings at 18*s.* to 30*s.*; fine pale olibanum-scented at 36*s.* per cwt. Good palish soft but glassy *Cape* gum realised 25*s.*; ordinary dark blocky *Australian*, 16*s.* to 16*s.* 6*d.* per cwt. *Persian* gum lower, over 300 bags selling at 13*s.* for ordinary blocky sorts; and 21*s.* per cwt. for fair small pale clean gum.

Gum Mastic is lower. Good pale drop may be had at 2*s.* per lb.

Ipecacuanha.—A considerable amount of business has been done privately since the last auctions. One broker who then bought in most of his supply has since sold the whole of it excepting one bale, and others also report large sales; nearly all this buying has been for shipment to America, and prices at the close show some advance over the last auction rates. Colombian root has also been moving off well, and is firmly held.

Jaborandi.—The parcel of leaves now on the way from the River Plate consists of 10 or 12 cwt., not of 30 cwt., as mentioned in our report of last week. Meanwhile two further arrivals, aggregating 24 bales, have been received in Liverpool from Ceará (Brazil).

Jalap is firmly held, and owners are inclined to ask higher prices, although up to the present fine bright Vera Cruz has not been sold at a higher price than 1*s.* 4*d.* per lb.

Lycopodium.—It is expected that after the passage of the new American Tariff Bill there will be a strong demand from the States for this, as well as for certain other drugs largely used in America, and an increase in the price of lycopodium is then expected to take place.

Marshmallow-root.—In Germany the price of this root has considerably advanced lately, and a further rise is expected, as there is very little stock left (the last crop having been small), and no new root can come into the market until late in the autumn.

MENTHOL.—No demand at the present quotations. Holders still ask 17*s.* to 17*s.* 6*d.* per lb. on the spot nominally, but for February-March shipment there are offers at 13*s.* 3*d.* per lb., c.i.f. terms, and for April shipment at 13*s.* per lb. c.i.f., and there is no confidence in the future of the article.

MORPHIA.—The makers have again raised their quotations. Powder is now quoted by them at 5*s.* 3*d.*, crystals at 5*s.* 5*d.* per oz. But this advance appears to have somewhat outrun the market, for we understand that even at present it is still possible to buy powder at 5*s.* per oz. or less from the second-hand.

OIL (COD LIVER).—Very unfavourable reports have been received this week from Norway; the fishing is said to have been exceedingly bad, both in the Söndmöre district, where it is now finished, and in the Lofoden, where it will be in progress until Easter, when the fishermen will move northwards to Finmarken. Manufacturers and agents ask from 70*s.* to 85*s.* per 25-gallon barrel, c.i.f. terms, for best new non-congealing oil, but we hear from wholesale druggists that they have not yet found it necessary to pay these prices.

OPIUM.—In the early part of the week holders temporarily showed much more willingness to sell than they had done of late, but at the close the market is quite firm again, and there are few parcels offering at reasonable figures. For fine old *Smyrna druggists'* opium a bid of 11*s.* 6*d.* per lb. has been refused. *Seconds* are held at from 10*s.* to 11*s.* per lb. There are no longer any sellers of Persian opium for forward shipment, and on the spot the quotations run from 10*s.* to 11*s.* 6*d.* per lb. Good to fine *soft shipping* opium is quoted at 11*s.* 6*d.* to 12*s.* 6*d.* per lb. Commenting upon the position of opium, the *Oil, Paint, and Drug Reporter* (New York) points out that "the principal immediate cause of the upward turn in values was the decision arrived at by the House of Representatives to impose an import duty of $1.00 per lb. on the drug. When it became known that the restoration of a duty was contemplated a large demand of a speculative character developed, which assisted materially in establishing values on a higher basis. Independently of what Congress may ultimately do with the Tariff Bill, the considerations bearing on the prospects abroad will probably keep the markets in a favourable position, both there and here, for some time to come. The fate of the tariff measure containing the provision to tax opium may not be decided for several months, and meanwhile the late advance in quotations has added about one half of the amount of the proposed duty to the current price." The imports of opium during the last two years into the U.S. were:—

	1893.	1892.
	lbs.	lbs.
Crude and unmanufactured .. .. (Duty free.)	603,976	466,052
Prepared for smoking ... . (Dutiable.)	73,267	60,537

Constantinople reports, dated February 15, state:—"During the first half of the month considerable sales (about 140 cases) have been made to America, chiefly *druggists'* quality, at 9*s.* 6*d.* to 10*s.* 9*d.* per lb., and *soft shipping* at 11*s.* 7*d.* per lb. f.o.b. The rise has been mainly due to more or less speculative buying for American account, owing to the expected tariff changes. There is reason to believe that considerable damage has been done to the crops in some districts, although from others good progress is reported. To-day the market is quieter, at about 3*d.* per lb. decline from the top prices." Our Smyrna correspondent writes, under date of February 10:—"During the week from February 3 to 10, 263 cases have been sold—viz., 249 cases *Karahissar* talequale at 11*s.* per lb. f.o.b., and *Yerli* talequale at the same price; 13 cases *Current* talequale, at from 10*s.* 6*d.* to 10*s.* 7*d.* per lb. f.o.b., and 1 case *Bogaditz* talequale, at 11*s.* 1*d.* per lb. f.o.b. About 250 cases of this parcel were for America. The market closes firm with a rising tendency. The arrivals for the season were 1,181 cases, against 3,883 cases in 1892–93." Another correspondent writes:—"The recent large American purchases, although effected by the agent of the firm of Powers & Weightman, the Philadelphia morphia makers, were really not for that house, but for various speculators, among whom Lanman & Kemp are mentioned, who are securing supplies in anticipation of the raising of the opium duty in the States. With regard to the alleged damage caused by the cold, of which you speak in yours of February 10, I must tell you that until now no serious harm has been done; that year by year the growing crops suffer slight damage, and that were it not for this the average crop generally would be very much larger than it has been. This year has been exceptionally favourable, and if we are saved from drought, excessive rains, or hot winds, during the crop, we shall have a most abundant harvest in all districts, Salonica, Malatia, Tokat, Zileh, and Angora included. Probably few will believe you now, if you print these facts, but in three months to come the trade will thank you for having given them warning."

ORANGE-PEEL.—Good *Curaçao* ringlets offer at 5¾*d.* per lb.

PERMANGANATE OF POTASH.—The convention, which broke up, or at any rate was paralysed, some time ago seems to be in process of reconstitution, with the result, that prices have risen somewhat. Large crystals are now offered at 70*s.*, small ditto at 65*s.* per cwt., by the makers. For large quantities these figures might be shaded. In the second hand there are still supplies at 60*s.* per cwt., perhaps a trifle less.

QUICKSILVER is dull, at 5*l.* 17*s.* 6*d.* per bottle from the importers, and 5*l.* 16*s.* in the second hand. There has been an arrival of 5,000 bottles from Seville this week.

QUININE.—No business was reported until Wednesday, when 10,000 oz. were said to have changed hands at 11½*d.* per oz., showing a decline of fully ⅛*d.* per oz. The market closes dull. The imports of cinchona bark and its alkaloids into the United States during the last two years were as follows:—

		1893	1892
Cinchona bark	lbs.	2,133,123	3,144,284
Quinine sulphate and other cinchona salts ..	oz.	2,777,537	3,486,922

The following are the manufacturers' quotations:—*Howards*, bulk, 1*s.* 2*d.* to 1*s.* 3*d.*; vials, 1*s.* 3*d.* to 1*s.* 4*d.* *Whiffen*, bulk, 1*s.* 1*d.*; vials, 1*s.* 3*d.* *Pelletier*, vials, 1*s.* 5*d.* to 1*s.* 5½*d.*; *Fabbrica Lombarda*, bulk, 1*s.* 1*d.*; vials, 1*s.* 3*d.* All *German* brands in bulk, 1*s.* 1*d.* per oz.

SAFFRON.—A correspondent in Valencia writes:—"What is the reason of the continual decline in the price of saffron? It is notorious that the growers can hardly make any profit at all on the drug, as apart from the low rates now quoted for it, the cultivation is troublesome, and requires great pains. The answer is simply that, at the moment, there is no other product which it would pay to grow as a substitute, even for the depreciated saffron. Wine, corn, and all other staple products of the saffron country are quite as unremunerative to the former as saffron itself, and as the saffron farmer pays no rent for his ground during the first year (saffron being a crop which yields no harvest the first season), he continues to grow it as the only choice he has. But you may depend upon it that, as soon as the cultivation of staple-produce begins to pay again the saffron-area will be diminished considerably, and a rebound in price is then inevitable."

SALTPETRE.—The price of British refined saltpetre was raised 6*d.* per cwt. by the makers on Monday, and on Wednesday a fresh advance of 6*d.* to 1*s.* took place. Kegs are now quoted at 23*s.*, casks at 22*s.* 6*d.* per cwt.

SANTONINE.—There appears to be very little offering at present, and indications seem to favour an early advance in price. From 5*s.* 9*d.* to 6*s.* per lb. is quoted, but holders do not seem to care to sell, at any rate at the lower figure.

SILVER has again declined considerably. To-day's quotation being 28⅜*d.* per oz. on the spot, for bars, against 29⅛*d.* per oz. last Thursday. Silver salts, of course, follow the decline of the metal; *nitrate* was offered yesterday at 1*s.* 9½*d.* per oz.

SODA CRYSTALS have further declined in price since last week, and it is possible to buy to-day at 44*s.* per ton ex-ship London. The reason of the decline is probably the increase in the output of the article in London. There are now two manufacturers on the Thames, and Messrs. Brunner Mond &

Co. are building a new London factory, which will soon be turning out crystal soda.

SODA HYPOSULPHITE.—Steady, at 6*l.* 10*s.* in kegs, and 6*l.* in casks.

SUGAR OF MILK.—We recently called attention to the advance in the price of this drug. The rise has made further progress since then, and to-day the quotation for best white crystals is from 50*s.* to 52*s.* 6*d.* per cwt. The article is looked upon as in a very firm position, as several manufacturers have "frozen out" by the unremunerative level to which the drug had been depressed, and a good American demand is expected.

TEA.—The tea market is quiet this week with a slight tendency to lower prices (for all but fine teas), as the result of a slackened demand from the country. Deliveries in January were, of course, remarkably good, and dealers sold a lot of tea, and can only expect a quieter time for a while. Supplies continue heavy, and there is a sale of no less than 24,000 packages of Ceylon catalogued for next Tuesday. It is more than likely that this will result in lower quotations for common tea, although sound common Pekoe, Souchong, and Pekoe sold as low as 5*d.* and $5\frac{1}{4}$*d.* last Tuesday. Fine Assams and Ceylons, however, are still much wanted, and fetch very full prices. Commonest Pekoes are steady at $3\frac{3}{4}$*d.* to 4*d.* per lb., but grades from 5*d.* to 7*d.* are rather firmer.

TURMERIC.—Exceedingly dull and neglected. For good bright *Madras* ginger, 27*s.* per cwt. was paid recently. *Bengal* is quoted at 17*s.* per cwt.

VANILLA.—There have been rather heavy arrivals lately; among others 54 cases by the *Douro*, *viâ* Marseilles.

THE LIVERPOOL MARKET.

LIVERPOOL, February 20.

ANISE.—Further sales of dusty *Chilian* have been made at 23*s.* per cwt., and now only good clean is offering at 25*s.* 6*d.* to 26*s.* per cwt.

CALABAR BEANS are slightly better, 30 bags having been sold at $1\frac{3}{4}$*d.* per lb.

CHILLIES.—The new Sierra Leone chillies are arriving freely, and the market is easier at 29*s.* to 30*s.* per cwt.

FENUGREEK.—Fifteen tons brown Alexandrian seed sold at 7*l.* per ton, and 22 tons pale *East Indian* at 8*l.* per ton.

GINGER.—Arrivals of the new crop of *African* ginger continue to come in, and sales have been made at 30*s.* per cwt.

GUM ACACIA.—*Soudan* sorts still fail to attract buyers in quantity, but there has been rather a renewed inquiry for pale soft quality, in which some business has been done at 54*s.* per cwt. The lower qualities offer sparingly, and are firmly held.

OIL (CASTOR).—The market for good seconds Calcutta is steady at $2\frac{3}{8}$*d.* ex-store or $2\frac{5}{16}$*d.* ex-quay.

TURMERIC.—Five hundred bags damaged *Bengal* sold at 10*s.* 6*d.* to 10*s.* 9*d.* per cwt.

WAX (BEES').—Sales of grey and yellow *Chilian* have been made at 7*l.* 5*s.*, showing a much better market, and 6 ballots of Gambia realised 6*l.* 12*s.* 6*d.* per cwt.

THE AMSTERDAM CINCHONA MARKET.

AMSTERDAM, February 17.

THE analyses of the Java cinchona bark to be offered at our sales on March 1 have been completed. The manufacturing bark contains 16 tons sulphate of quinine or 5·06 per cent. on the average. About 1 ton contains about 1–2 per cent. sulphate quinine; 15 tons, 2–3 per cent.; 56 tons, 3–4 per cent.; 79 tons, 4–5 per cent.; 73 tons, 5–6 per cent.; 61 tons, 6–7 per cent.; 19 tons, 7–8 per cent.; 5 tons, 8–9 per cent.

THE SMYRNA OPIUM MARKET.

(*Telegram from our Correspondent.*)

SMYRNA, Wednesday evening.

THE American opium purchases have continued this week, and prices are expected to advance further. Since my last message 40 cases of usual grade manufacturing-opium have been sold at prices ranging up to the equivalent of 11*s.* 6*d.* per lb. f.o.b., which means an advance of 5*d.* per lb. The latest reports from the growing districts speak favourably of the winter sowings.

THE COLLECTION OF PERUVIAN BALSAM.

ACTING-CONSUL G. J. DAWSON, of San Salvador, sends the following information, of which much is not generally known, concerning the collection of Peruvian balsam in his district:—

This article is the product of the *Myrospermum salvatoriensis* or *Hoitziloxitl*, which grows almost exclusively on the "Costa del Bálsamo," or "balsam coast," of Salvador, comprised by the southern shores of the departments of Sonsonate and La Libertad.

The plant yielding the balsam is a beautiful tree averaging 100 feet in height and 20 inches in diameter. There are two ways to extract the liquid, erroneously styled "Peruvian" balsam. The first consists in scraping the skin of the bark to the depth of one-tenth of an inch with a sharp machete (knife) in small spaces some 12 to 15 inches square all along the trunk and stout branches of the tree. Immediately after this operation the portions scraped are heated with burning torches made out of the dried branches of a tree called "chimaliote," and after this pieces of old cotton cloth are spread on the warmed and half-charred bark. By punching the edges of the cloths against the tree with the point of the machete they are made to adhere. In this condition they are left for twenty-four or even forty-eight hours, when the rags are gathered and boiled in big iron pots. After this the rags are subjected, while still hot, to great pressure in an Indian machine made of strong ropes and wooden levers worked by the hand. The balsam oozes out and falls into a receptacle, where it is allowed to cool. This is called raw balsam. It is refined by re-boiling and draining, after which it is packed in iron cans ready for market.

The other method of extracting balsam consists in entirely barking the trunk and heavy branches of the tree, a process which, as a rule, kills it outright and at best renders it useless for several years. The bark is finely ground, boiled, and submitted to pressure in order to extract the oil, which is considered of an inferior quality to that obtained by the system first described. Both methods are defective, but the latter is ruinous and is forbidden by the authorities. The oil-gathering takes place in January.

The name of Peruvian balsam was given to this article because it was first sent from Salvador to Peru in the time of the Spaniards and reshipped to Europe from Callao—so says the consul, but it is generally held that the drug received its name from the circumstance that the name "Peru" was originally used to denote the whole of the western coast of South and Central America from Mexico down to Chili.

MR. E. M. HOLMES exhibited at the Linnean Society recently a flowering specimen of a new species of cascarilla (*C. Thomsoni*), and the bark of the tree, from New Granada.

THE SALE OF FOOD AND DRUGS ACT.—ANALYSIS OF PRIVATE PURCHASERS' SAMPLES.—The Clerkenwell Vestry have decided to make a scale of charges for the analysis of articles of food purchased by private persons. The Act provides that the Public Analyst may charge a fee not exceeding 10*s.* 6*d.* for each sample analysed; and, after consultation with the Analyst, they have decided that a charge of 5*s.* for each sample be charged to parishioners of Clerkenwell, and 10*s.* 6*d.* to non-parishioners. This resolution, it is considered, will be a considerable protection against adulteration.

Correspondence

Memoranda for Correspondents.

In letters for publication correspondents are requested to express their views as concisely as possible.

Correspondents should write on one side of the paper only, and devote a separate piece of paper to each subject of inquiry.

The name and address of the writer should accompany all communications with, if desired, a distinctive nom-de-plume.

"What Kills the Oak?"

Sir,—The couplet quoted by Mr. A. Berridge is from "The Secrets of Angling, by J. D., Esquire" (John Dennys), or rather from a verse appended thereto and signed "B. R." It is endorsed "*Probatum*," and is thus explained in William Lauson's "Comments" on Dennys's poem (1653):—"I have heard much of an ointment that will presently cause any fish to bite; but I could never attain the knowledge thereof. The nearest in mine opinion—except this *Probatum*—is the oil of an osprey, which is called *Aquila marina*, the sea eagle. . . . Some likelihood there is also in a paste made of *cocculus indicæ*, *assafœtida*, honey, and wheat flour. But I never tried them; therefore I cannot prescribe. That which kills the oak I conjecture to be ivy: till I change my mind. This excellent receipt, divers anglers can tell you where you may buy it." To this Mr. Arber, in his "English Garner," vol i., p. 197, adds:—"Surely this must have been a standing joke among the practitioners of the art."

Yours, &c.,

Epworth, February 10. C. C. Bell.

Sir,—Father Time is sometimes intercepted in his work of destruction by *Hedera Helix*, and as the question has cropped up in a piscatory connection, it may not be inappropriate to quote Salmon. In his "English Herbal" this author speaks thus quaintly of the well-known habit of the ivy:—"It sends forth several small roots in the body and branches of the tree upon which it clambers, whereby it climbs up almost into all parts of the tree, and it so strongly fastens its claws or radiculæ therein that it draws the nourishment out of the tree, and thereby in time kills it by consuming the life and moisture thereof, and by choaking (*sic*) it with the abundance of shadow and humidity of its leaves and branches."

The same writer, treating of Ivy Gum, says:—"This shrub or bush yields either voluntarily or by being bruised, in hot countries, a kind of reddish hard gum, called *Hederæ Gummi*. Some use this gum, with other things, as a bait to kill fish." Or, as another authority puts it, "Gum ivy is used to rub over baits to render them attractive to fish" (Gray's "Supplement"). "Oil of ivy" would be made by macerating the berries in olive oil or oil of ben, and an "oily tincture" in the same way, with oil of turpentine as the menstruum.

Further references to ivy gum and oil of ivy are to be found in Isaak Walton's "Complete Angler," where also appears the mystical recipe by R. R., quoted from "The Secrets of Angling," the whole verse reading thus:—

> To bliss thy bait and make the fish to bite,
> Lo! here's a means, if thou canst hit it right:
> Take gum of life, fine beat, and laid to soak
> In oyle well drawn from that which kills the oake.
> Fish where thou wilt, thou shalt have sport thy fill:
> When others fail thou shalt be sure to kill.

Walton says a noted salmon-fisher of his acquaintance was in the habit of anointing his bait-worms with the oil of ivy, "whereby they incorporated a kind of smell that was irresistibly attractive, enough to force any fish within the smell of them to bite." Again, "I shall impart, also, another experiment, but not tried by myself, which I will deliver in the same words that they were given me in writing by an excellent angler. He told me it was too good to be told but in a learned language, lest it should be made common:—'Vulnera hederæ grandissimæ inflicta sudant balsamum oleo gelato, albicantique persimile, odoris vero longè suavissimi.'" Translation: "Slit the largest branches of an ivy-tree, and it will yield an oleaginous balsam, white in colour and of a pleasing odour."

Yours truly,

C. S. Ashton.

Sir,—In some parts of the country tr. benzoin. co. is called balsam of life, therefore gum of life would be gum benzoin. Again, it is a well-known fact that the ivy does kill the oak. So that I would suggest that what the writer meant was gum benzoin. to be "soaked" in oil of ivy.

Ravenscroft. (238/36.)

Sir,—Ivy is supposed to kill the oak-tree in time, and I should think that oil of ivy is meant in the old recipe given.

Gum of ivy is also often recommended for the same purpose in old fishing-books; but gum of life might be gum guaiacum, as guaiacum-wood is *Lignum vitæ*.

Yours truly,

Coventry, February 10. A. A. Bones.

Sir,—In reference to Mr. Berridge's question, ivy has always been said to be hurtful to the trees upon which it climbs, and the gum or oil said to be obtained from cuts or bruises on its stem has likewise been stated from very early times to be attractive to fish. I find in an old "Dispensatory" that the oil is "an empyreumatical fetid oil, of some esteem amongst anglers," and in another I find it stated that it is used in Eastern countries, and, according to Roy, sometimes in our own. It is a resinous juice, which solidifies into reddish-brown or yellowish masses, of a slight agreeable smell when warmed; rectified spirit dissolves three-fourths of it, forming a dark red solution.

I must leave "gum of life" to some other correspondent.

Manchester. Quivis. (237/44.)

Sir,—I think Mr. Berridge will find that oil of thyme is not indicated, but oil of ivy.

I remember about thirty years ago translating for a gentleman, who now lives in Leicester, a passage from an old black-letter tome—as near as I can recollect as follows:—

"Great ivy trees being wounded discharge an oil—which being added to worms, makes them shining—attractive to fishes." The ivy is considered to impoverish and in some cases strangulate its support.

Yours, &c.,

Arthur Peake.

Paraffin for the Hair.

Sir,—In fairness to the present proprietor of "Eau Horn," Mr. Cassie, chemist, Newgate Street, E.C., I beg you to insert these few lines in answer to Mr. C. S. Ashton's remarks on "Eau Horn." This preparation never contained a drop of citronella, and paraffin never entered into its composition, nor is it composed, as Mr. Ashton says it "appears" to be, of benzoline. It could not have been at one time "one thing," and the next time "something else." I cannot, of course, elucidate the "mystery" of its composition, but beg to say that the active ingredients (five in number—extracts and powders) are dissolved in a product of petroleum, specially manufactured by distillation and filtration for "Eau Horn"—this article being, in action and effect, as different from petroleum as vaseline, although both are made from petroleum. Baldness, or loss of hair from the crown or forehead, as seen in men, is due, as a rule, to an over-burdened state of the vascular circulation of the scalp, showing signs of heat, irritation, and over-excitement. How can crude paraffin or petroleum do good in such cases? Our aim should be to reduce the morbid action, and not increase it and the irritation by petroleum or cantharides applications.

Yours truly,

Briar Bank, O. E. Horn, D.Sc., F.S.Sc.Lond.

Newport, I.W., February 17.

Sir,—From thirty years' practical experience (I have, as a rule, some 200 heads of hair passing through my hands weekly) I have not yet observed a good thick long head of hair from the use of paraffin. At the same time I much doubt of paraffin being detrimental to the hair's growth, but should give it as my opinion, when judiciously used, rather beneficial than not.

Yours truly,
G. Chase, Hair Specialist.
8 Sutherland Avenue, W., Feb. 21.

Mr. Cassie, as proprietor of Eau Horn, also writes to contradict Mr. Ashton's statements.

The Purity of Iodised Collodion.

Sir,—I write with tears in my eyes—tears produced by the irritating emanations from a specimen of collodium iodi, which circumstances seemed to indicate for application to my bosom. Now, I ordered the solution to be made of iodine in collodium flexile, P.B., into the composition of which only ethylic ether ought presumably to enter.

The formation of some irritating volatile substance has long been recognised to result from the employment of methylated spirit in the preparation of the tincture of iodine, and my own experience has convinced me that the same substance, or something equally obnoxious, is produced when the so-called methylated ether is used as a solvent for iodine. Can you tell me authoritatively whether or not the presence of these highly-irritating fumes is pathognomic of the employment of the methylated ether, and whether a chemist employing such ether in the preparation of the collodion would thereby render himself liable to a prosecution for vending a product "not of the nature, quality, and substance demanded"?

I am, Sir, yours faithfully,
Weak Chest. (241/7.)

[We are told by ether-manufacturers that no methyl oxide or any of the impurities of methylated spirit remain in ether prepared from that spirit. "Weak Chest's" observations suggest that his collodion contains unaltered methylated spirit, for the irritating vapours arise from iodine products of acetone, allyl alcohol, &c., which do not exist in methylated ether. It would be interesting if someone would determine whether the characteristics referred to arise from the use of methylated ether, alone or along with pyroxylin.—Ed.]

The Tail-end.

Sir,—With reference to "Synthetic Remedies," we have the following, which we do not see mentioned on page 168, in stock:—Diiodthiophen, tribromphenolbismuth, soziodol-zinc, soziodol-sodium, guaiacol carbonate, creasote carbonate, salophen.

Yours faithfully,
6 Market Place, Cambridge, Orridge & Sussum.
January 31.

Mr. Karl G. Zwick (Covington, Ky., U.S.A.) sends us his list of new remedies, which it is interesting to compare with those which we have already published. Mr. Zwick says:—

"We have daily calls for acetanilide, antipyrin, anitol, bromoform, guiacol, ichthyol, phenacetin, resorcin, salol, and sulphonal.

"The new remedies which we keep, and have kept ever since we bought them, and very likely will keep for ever, as there is no call for them—or, at least, very little demand—are: Agathin, alumnol, amylene hydrate, chinoline, chloralamide, creolin, diuretin, ethyl bromide, ethyl iodide, eugenol, europhen, exalgin, formalin, gallacetophenone, homatropine, hydrochinon, hypnone, iodol, kairin, lysol, methylene blue, methyl violet, naphthalene, naphthol, phenocoll, piperazine, pyridine, saccharin, salacetol, salipyrin, somnal, sozoiodol, thallin tartrate, thiol, tumenol, and urethane.

"We have also sold—although, of cource, this does not belong under the head of synthetic remedies—tuberculin (Koch), tuberculocidin (Klebs).

"We have also the following American remedies, which are all reported by analysts to be combinations of acetanilide, &c.:—Contropena, antipuralgos, therapin, sennin, and antikamnia. Asepsin (Lloyd) we are also asked for."

Arsenical Compounds.

Sir,—The report in your last issue of a prosecution for selling Cooper's Sheep-dip without observing the regulations of the Pharmacy Act relating to arsenic leads me to make a suggestion to the makers of poisonous compounds the sale of which is affected by that Act.

Along with every such packet there should be given printed directions to the retailer, so that he may know without any doubt what precautions he must take to observe the law. I have specially in view "Rough on Rats," at present advertised all over the kingdom. If it be a preparation of arsenic, as some suppose, we are surely entitled to be told so; intimation that such preparations are poisons, and may only be sold by chemists, is not sufficient.

Reform. (242/8.)

Laenanthes.

Messrs. Keene & Ashwell, of 74 New Bond Street, add their testimony to the popularity of lacnanthes. They have supplied the tincture to medical men and chemists for a long time.

Newspaper Prescriptions.

Sir,—When we look at the replies to queries in some newspapers it may well surprise us that there are not more accidents than there are from poisonous remedies the recipes of which are given gratuitously. I have frequently had such recipes cut out and brought to be made up, and several times have refused on account of the danger. The latest one I have come across was in the *Echo* of February 5, and was as follows:—

Arsenious acid	30 grains
Acetate of morphia	20 „
Creosote	q.s. for paste

It was headed "Toothache: To destroy the nerves of the tooth." There were no directions.

Ought not some restriction to be placed on the publishing of these things?

Yours truly,
Hemel Hempstead. E. H. Flower.

DISPENSING NOTES.

Correspondents should consult "The Art of Dispensing" in regard to dispensing difficulties. Difficulties not explained therein may be sent to the Editor, who invites a general expression of opinion upon the undermentioned topics.

Butyl-chloral Hydrate.

Sir,—I had the following mixture to dispense:—

Butyl-chloral hydrat.	ʒij.
Tinctura gelsemii	ʒiij.
Solve et adde—	
Spt. vin. rect.	ʒij.
Antipyrin.	ʒiv.
Aqua ad	℥iij.
M. Ft. mist.	

Sig.: ʒj. for a dose, to be repeated in an hour if not relieved.

I dissolved the butyl-chl. hyd. in the tr. gelsem. and S.V.R., then dissolved the antipyrin in the water; on mixing the solutions, there was a separation of a thick oily liquid at the bottom of the bottle. What was it? Could it have been prevented? If so, how? Was it right to send it out with a "shake the bottle" label?

Yours faithfully,
Agnosco. (238/70.)

[It is not an uncommon practice to dissolve butyl-chloral hydrate in spirit when making aqueous mixtures of the drug. The practice is an error, because butyl-chloral alcoholate is formed, and it separates in oily drops when water is added. Since the prescriber in the above case probably meant to have a clear mixture, his attention should be called to the interaction which takes place, and his authority obtained for using S.V.R. *q.s.*]

LEGAL QUERIES.

Immediate information on pharmaco-legal matters is available in "Pharmacy and Poison Laws of the United Kingdom," Alpe's "Handy-book of Medicine-stamp Duty," and THE CHEMISTS' AND DRUGGISTS' DIARY.

232/11. *Midlands.*—The assistant's certificate of the Apothecaries' Society does not specifically authorise you to use any entitling letters, and those that you suggest might be regarded as infringing the Medical Act. There can be no legal objection to your announcing in plain language that you have the certificate if you think it good enough to boast about, but you must be careful to avoid any expression which might lead anyone to think you held the licentiateship.

237/4. *Poison.*—The notice to be given by or to an assistant depends not on the intervals at which he is paid, but on the custom of the trade, if that can be established. In the drug-trade the notice is considered to be monthly.

265/32. *H.* writes:—"A friend who was going to South Africa wanted 1 dozen boxes Holloway's pills, and finding I had only eleven in stock I sent to a neighbour for one, and so I completed the order. Can these transactions be considered wholesale and retail and, if so, which is which?" [The sale of the dozen to the consumer was no doubt a retail transaction. The sale of the one box to the chemist to sell again was a wholesale transaction. We do not consider that the difficulty in regard to wholesale trade comes in in this instance. More doubtful is the sale of a photographic chemical to a man who wants to use it in his business, or the sale of a sheep-dip to a farmer who likewise uses it in his business.]

263/26. *H. H.*, a chemist, A.P.S., and dentist (qualified), takes an apprentice, with the object of teaching him both professions. Is there any legal objection to this course, and could the apprentice afterwards qualify for both—his apprenticeship counting in each case?

[A formal certificate of apprenticeship is not required for the pharmaceutical examination. The candidate must produce a certified declaration that he has been for three years practically engaged in the translation and dispensing of prescriptions. For the dentistry qualifications a certificate must be produced, signed by a qualified dentist (this is not stipulated by the Act nor by the Medical Council's regulations, but in practice it is demanded), stating that the candidate has been engaged during not less than three years in acquiring a practical familiarity with the details of mechanical dentistry under his instruction. If you can conscientiously sign both those certificates we do not see who is to object.]

235/23. *Dental.*—It is not illegal for an unqualified person to administer nitrous-oxide gas for painless extraction of teeth, but it is decidedly improper that he should do this. In the event of any fatality, the presumption justifying a possible verdict of manslaughter would be much greater against an unqualified than against a qualified man; for it would be said that the former had recklessly undertaken a duty which he was not fitted to perform.

238/11. *Anxious.*—The seller of the poison must be qualified. The qualification of his employer does not assist him.

232/52. *A. N. S.*—Registration at Stationers' Hall is of no value as far as the name of the article is concerned. You can only prevent the other party using the title if you can get it on the trade-mark register. As to how to do that, refer to the DIARY.

270/33. *H. W.*—Your quinine-and-iron tonic label is a stock one, quoted in Alpe's "Handy-book" as not liable. You would be saved from much uncertainty if you kept that work in your library.

236/64. *F. O.* asks if the landlord of a house in a country town is liable for expenses incurred through illness caused by defective drainage. [Except under the Industrial Dwellings Act, where the landlord of a small tenement warrants same at the commencement of the tenancy to be fit for habitation, there is no implied warranty as to an unfurnished house.]

241/69. *J. J. W.*—It is legal for a person not a registered chemist to manufacture an arsenical sheep-dip, and he may sell it wholesale, but not retail.

242/10. *Alfonso.*—Medicine-stamps are not required for veterinary preparations under any circumstances.

244/13. *Inquirer.*—The landlord is bound, like everybody else, to fulfil his contract, and he is liable for damages resulting from his neglect. But we do not advise you to take any steps without consulting a local solicitor, who would see the lease and ascertain on the spot whether any liability has been incurred.

240/61. *Powder.*—If you advertise "Pink Cooling and Teething Powders" in such a manner as to make them liable to stamp-duty, you cannot legally sell any of those powders in a packet or box without affixing a stamp thereto. The liability, so long as it lasts, affects all powders answering to that description or of the same composition. The advertisement of "Pink Cooling and Teething Powders" would make pink cooling-powders or pink teething-powders liable, unless they were of quite a different composition.

MISCELLANEOUS INQUIRIES.

The Editor replies to queries of general interest, in the order in which they are received. Replies are inserted according to the space available. Postal answers cannot be supplied.

Back numbers containing formulæ, educational or other specific information can be obtained from the Publisher.

226/28. *Strawberry.*—Your request is too general. We would prefer you to state your wishes in regard to unfermented wines exactly. As to concentrated waters, see DIARY, page 355.

226/26. *Britannia.*—On the small scale a mortar is just as good as an egg-whisk for Making Emulsions, but for large quantities churns are commonly and successfully used.

226/55. *Magnolia.*—The Edinburgh University requires you to pass the Matriculation examination before medical studies thereat can be recognised for qualification. That you should set your face to before doing anything else. In Edinburgh there are always a few chemists' assistants who manage to put in attendance at the classes and keep their situations at the same time. But we cannot undertake to advise you as to what *you* should do. That is a matter about which you should consult your employer or some medical man. You have misread our Educational Number, for we should never dream of offering to advise all and sundry as to their future career.

226/24. *A. Newton.*—You will find what you want on page 366 of the DIARY.

229/39. *J. H. T.*—See the note in our issue of February 17 under "Information Supplied." This is really the only satisfactory way of waterproofing cloth.

226/29. *R. H. W.*—There is a nice perfume on page 324, August 19, 1893, which may suit you for a speciality. Please refer to any of the indexes of the last half-dozen volumes, and you will find quite a number of references to perfume-formulæ. As to Beers, see page 367 of the Diary.

227/32. *Jean.*—We cannot understand the remarkable change which the **Polishing-paste** has undergone. The formula which you suggest is quite unlike the preparation which you sent us. Try the following modification of it:—

	Oz.
Kaolin	5
Whiting	5

Mix together and sift twice. Melt together—

Paraffin wax	3
Brown petroleum jelly	5

Add—

Paraffin oil	2

Then stir in the powder.

There was no lard or similar saponaceous fat in your sample. You should not overlook the fact that the best popular polishes are generally made with natural earths, which are harder and finer than such things as kaolin and whiting. "Gesso," for example, when genuine, is a powder resembling whiting, but it is a much better polisher than whiting.

227/54. *Subscriber* (Swansea).—We have not a previous query of yours before us, so we take it that it has been replied to. But why trouble yourself when there is a formula on page 383 of the Diary?

227/23. *Ars Longa.*—The formula for **Liquid Blue** in the Diary, page 357, is satisfactory. The point in making liquid blue is to get a proper Chinese blue, which is a superior variety of Prussian blue. There is a very large demand for the article in Scotland, and years ago insoluble varieties of Prussian blue were sifted out of drug-circles. The wholesale houses there have found out the kind of blue which suits the trade, and if some houses at this side of the border would take the trouble a similar condition would result. It may be noted that the Diary formula is intended for soft water. Hard water may cause streakiness; certainly it will use up some of the oxalic acid.

227/61. *Zampa.*—We understand that **Fish Oils** can be **Deodorised** like castor oil, by treatment with sulphuric acid. We cannot give you such particulars as would enable you to start the process commercially straight away; but if you use 1 oz. of sulphuric acid to 1 gallon you cannot be far wrong. The oil must afterwards be washed with water. Some prefer such a mixture as—

	Oz.
Permanganate of potash	1
Sulphuric acid	8
Water	40

This has advantages in so far as it oxidises directly those bodies which are undergoing change.

277/60. *Gentiana Lutea.*—(1) The plaster seems to be emp. salicylic. et cannab. ind. See Diary, page 416. (2) **White Oils.**—See *C. & D.*, July 29, 1893. Many other formulæ can be traced through back numbers.

229/11. *F. J. W.*—**Calcium Bisulphite** is a solid salt, and can be obtained as such. Try any of the chemical houses who advertise in the Diary.

230/35. *Star One.*—You will find all about **Billiard-ball Colouring** in The Chemist and Druggist, September 2, 1893, page 378.

229/44. *A. H. W.*—You cannot take away or cover the burnt taste of lard.

229/32. *In Vino Veritas.*—To **Mount Salicin Crystals**, put a single drop of a 1-in-10 spirituous solution on a slip-glass; when dry put a ring of balsam round it; allow that to dry, then put on the cover-glass with balsam.

227/20. *Ernst.*—We have already replied to your first question. **Clove Cordial**:—

Cloves	1 oz.
Pimento	1 ,,
Caramel	1 ,,
Rectified spirit	1½ gal.
Water	½ ,,

Macerate for a few days; add—

Ol. caryoph.	ʒiss.

And filter into a clear syrup of—

Sugar	8 lbs.
Water	1 gal.

Mix.

230/34. *Pharmaceutical Histology.*—There is no work by Professor Maisch of the kind you indicate. See the review in our issue of January 20, page 86. We are not aware of anyone in England who makes materia medica lantern-slides, but you might communicate with Dr. H. C. C. Maisch, pharmacist, Philadelphia, Pa.

244/15. *Dulcamara.*—You should clean the rusty iron tank by rubbing it over with Bath brick to remove all rust, as far as possible, then wash it with a mixture of common hydrochloric acid 1 part and water 2 parts, and finally with water alone.

229/56. *Caveo* (Cardiff).—**Bird-food.**—The following is suitable for thrushes, larks, and other cage-birds:—

Pea meal	1 lb.
Coarse sugar	½ ,,
Fine-grated stale bread	½ ,,
Fresh butter	2 oz.
Yolks of two eggs.	

Mix well together, and brown gently in a frying-pan. When cold mix thoroughly with—

Poppy-seeds	2 oz.
Bruised hemp-seeds	2 lbs.

The hemp-seeds should, preferably, be fresh from the husks.

229/60. *Limes.*—**Lime-juice and Glycerine.**—The following is a formula containing lime-juice, but we have not tried it, although it was published many years ago:—

White wax	℥ss.
Almond oil	℥viij.

Dissolve by heat, and add—

Glycerine	℥j.
Lime-juice	℥j.
Oil of lemon	ʒss.
Oil of bitter almonds	♏v.
Rectified spirit	℥ss.
Water	℥ij.

Mix.

230/12. *Ringbone.*—**Horse-blister**—If you are to get 2*s.* 6*d.* per oz. for this, why not give liquor epispasticus? It is as certain a thing as you can get.

222/16. *Farmacista.*—**Spirit Gum.**—See reply to 226/60.

232/44. *Reggio.*—**Acid Glycerine of Pepsin.**—See The Chemist and Druggist, December 16, 1893, page 878.

232/38. *Inquisitive.*—Note the preceding reply. Quillaia has not been used in the dry state for foaming tooth-powders; but we should think that saponin would serve the purpose admirably, and a little of it would go a long way—say, 5 grs. to 1 oz. of powder. We shall be glad if you will try it and report to us.

226/60. *A Subscriber* (Huddersfield).—(1) **Spirit-gum for fixing false hair.**—The following is on the lines which you suggest:—

Canada balsam	ʒj.
Spirit of ether	℥iij.

Mix and perfume if desired.

(2) We hope to insert what you suggest in the next DIARY.

214/24. *Santal* (Biarritz).—(1) Glycerine and Cucumber.—The following is the best formula which we have:—

Warrick's jasmine pomade	℥iiss.
Powdered white Castile soap	ʒv.
,, borax	℈ij.
Otto of rose	♏xx.
Oil of lemongrass	♏v.
Rectified spirit	℥iv.
Glycerine	℥viij.
Water	℥xxv.

Mix the first three ingredients in a mortar, dissolve the oils in the spirit, add to the glycerine and water, and emulsify the fat with this mixture.

This preparation should be a limpid white emulsion. It has kept "sweet" in our hands for more than a year. (2) **Santal Essence for the handkerchief:**—

Oil of sandalwood	ʒj.
Ess. bouquet	℥iiss.
Rectified spirit to	℥x.

Mix.

218/50. *Ceylon.*—(1) You want a "reliable formula" for **Essence of Coffee and Chicory**, forgetting, no doubt, that there are perhaps not a dozen people in this country who have made the article, and none of them has thought fit to publish his experience in the matter. We know the essence to be made in the following manner:—A mixture of equal parts of chicory and coffee is percolated and repercolated with hot soft water until exhausted, a 1-in-2 liquid extract being thereby obtained. To this extract brewer's caramel is added in sufficient quantity to give the desired colour, and the whole is then converted into a thin syrup with sugar. (2) **Essence of Rennet.**—See DIARY, page 363.

218/47. *C. F. J.*—**Soluble Essence of Lemon.**—See the DIARY, page 370, in regard to this matter. All processes for rendering the oil soluble by the addition of magnesia, lime, and similar alkalies are more or less misleading, as the alkalies do not render the oil more soluble, but simply withdraw so much oil and acid resins. The latter would, in the ordinary course, dissolve in the spirit without adding to the flavour of the essence. It is now customary to omit treatment with magnesia. Simply shake together 1 part of oil of lemon with 5 or 6 parts of spirit. Do this occasionally for a few days; decant the spirituous portion, and strengthen the flavour by the addition of a small percentage of Poppelreuter's terpeneless oil of lemon. The large makers of soluble essences have, of course, perfected their processes of working by long experiment, and that is where they have the advantage.

228/74. *Quæstio.*—You will find all the materials that we can give you for a chemical entertainment for children in "Scientific Mysteries," published at this office, price 1*s* (by post 1*s.* 1½*d.*).

223/22. *C. H. C.* wishes to know what is the best way to **Cover the Taste of Eucalyptus Oil in a mixture.** We have not had the occasion to try, for we do not object to the taste. Can anyone give a hint?

223/18. *E. S. F.* (Antwerp).—The expression 20° Twaddell refers to Twaddell's hydrometer scale. Zero equals 1 000, and each degree 0·005, so that 20° equals specific gravity 1·100.

223/30. *T. F. E.*—For Bleaching generally see the second series of Spon's "Workshop Recipes" (5*s.*). Churchills also publish a volume in their technological series. It would have been better if you had told us exactly what you require the book for.

231/65. *Dermatol.*—**F.S.S.** are the accepted letters denoting Fellow of the Royal Statistical Society. Curiously, it is the only fellowship title used by Mr. W. E. Gladstone, in the London Directory. It is rather a "select" title, we understand. The Society's address is 9 Adelphi Terrace, Strand, W.C. A similar title, F.S.Sc., is much used by persons connected with pharmacy. It is obtainable at 160 Holland Road, W.

225/57. *R. F.*—The green coloration resulting when apomorphine and spirit of nitrous ether are mixed together is due to the oxidation of the alkaloid. See Dott, *Year-book of Pharmacy*, 1885.

225/42. *J. G. B. Noble.*—**Thresh's Reagent for Alkaloids** is made as follows:—

Liquor bismuthi	ʒj.
Potassii iodidi	ʒiss.
Acid. hydrochloric.	ʒiss.

M. et S.

Next Week.

Meetings, &c., to be held, and business to be transacted thereat. Suitable notices will be inserted in this section if received by the Editor on or before Wednesday.

Tuesday, February 27.

Royal Institution, Albemarle Street, W., at 3 P.M. Prof. C. Stewart on "Locomotion and Fixation in Plants and Animals."

Wednesday, February 28.

Pharmaceutical Society, 36 *York Place, Edinburgh*, at 8.30 P.M., (1) Dr. Gordon Sharp, on "The Action of Papain on Egg and Serum Albumin in Acid and Alkaline Solutions"; (2) "Discussion on the United States Pharmacopœia of 1890"; (*a*) "Hints from the United States Pharmacopœia," by Mr. C. A. Macpherson; (*b*) "Notes on Some Galenical Preparations of the United States Pharmacopœia," by Mr. George Lunan; (*c*) "The United States and British Pharmacopœial Assay Processes Compared, and other Notes," by Mr. George Coull, B.Sc.; (3) Mr. William Duncan, on "The Crystals Deposited in Liquor Strychninæ Hydrochloratis."

Brighton Junior Association of Pharmacy, 2 Sillwood Terrace, at 9 P.M. Social and musical evening. Mr. J. R. Gwatkin in the chair.

Thursday, March 1.

Chemists' Assistants' Association, 103 *Great Russell Street, W.C.*, at 8.30 P.M. Mr. T. H. Heap on "Œsypus and Lanoline."

Glasgow and West of Scotland Pharmaceutical Association, 94 *West Regent Street*, at 9.15 P.M. Mr. J. Rankin, B Sc., on "The Comparative Anatomy of the Respiratory Organs."

Chemical Society, Burlington House, W., at 8 P.M. Mr. C. T. Kingzett on "Aërial Oxidation of Terpenes and Essential Oils."

Liverpool Pharmaceutical Students' Association, University College, at 8.30 P.M. Mr. R. C. Cowley on "Milk Analysis."

Friday, March 2.

Royal Institution, at 9 P.M. Prof. John G. McKendrick on "The Theory of the Cochlea of the Inner Ear."

Saturday, March 3.

Royal Institution, at 3 P.M. Lord Rayleigh on "Light; with special reference to the Optical Discoveries of Newton."